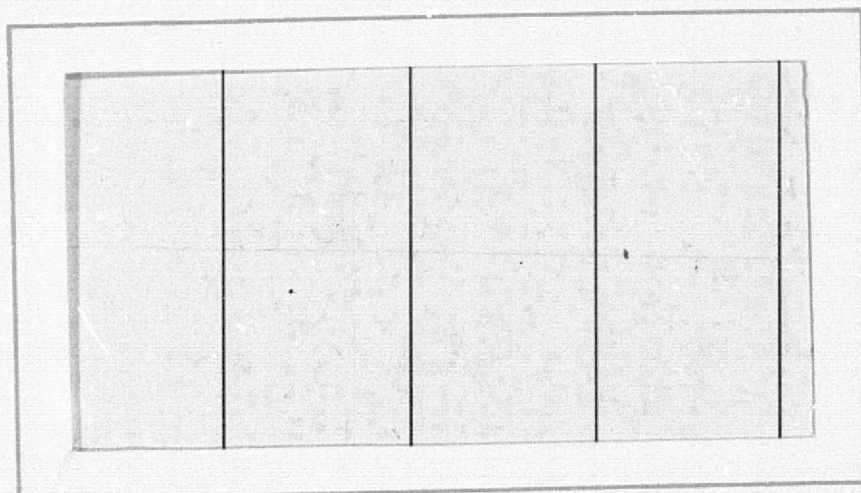


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Vol. II



(NASA-CR-143968) TRACK/TRAIN DYNAMICS TEST  
REPORT TRANSFER FUNCTION TEST. VOLUME 2:  
DATA BOOK, y-AXIS TESTS, ACTUATORS 180 DEG  
OUT OF PHASE. RUNS: 6, 9, 13, 14 AND 23  
(Martin Marietta Corp.) 269 p HC \$8.50

N75-33402

Unclas  
G3/37 42661

**MARTIN MARIETTA**

POST OFFICE BOX 179, DENVER, COLORADO 80201





TR-005-TF

30 May 1975

TRACK/TRAIN DYNAMICS

TEST REPORT

TRANSFER FUNCTION TEST

Volume II

Data Book

Y-Axis Tests

Actuators  $180^\circ$  Out of Phase

Runs: 6, 9, 13, 14 & 23

TABLE I. DATA INDEX - VOLUME II

| MEAS. NO. | XDCR SENSITIVITY    | RUN NUMBER VS PAGE NUMBER |          |                |                |                |            |  |  |  |  |
|-----------|---------------------|---------------------------|----------|----------------|----------------|----------------|------------|--|--|--|--|
|           |                     | RUN 6                     | RUN 9    | RUN 13         | RUN 14         | RUN 23         |            |  |  |  |  |
| FL1/OSC   | 15K#/V<br>7.651V    | PP. 7                     | PP. 55   | PP. 105<br>106 | PP. 158<br>159 | PP. 215<br>216 | 217<br>218 |  |  |  |  |
| FL2       | ↓                   | 8                         | 56       | 107            | 160            | 219            |            |  |  |  |  |
| FL2/FL1   | 15K#/V<br>15K#/V    | 9                         | 57       | 108            | 161            | 220            |            |  |  |  |  |
| FV2       | 20K#/V<br>15K#/V    | 10                        | 58<br>59 | 109            | 162            | 221            |            |  |  |  |  |
| FV3       | ↓                   | 11                        | 60       | 110            | 163<br>164     | 222<br>223     |            |  |  |  |  |
| DV1       | 0.5"/V<br>15K#/V    | 12                        | 61       | 111            | 165<br>166     | 224            |            |  |  |  |  |
| DV2       | ↓                   | 13                        | 62       | 112            | 167<br>168     | 225            |            |  |  |  |  |
| DV3       | ↓                   | 14                        | 63       | 113            | 169            | 226<br>227     |            |  |  |  |  |
| DV4       | ↓                   | 15                        | 64       | 114            | 170            | 228            |            |  |  |  |  |
| AV1       | 1 Gp/V<br>15K#/V    | 16                        | 65       | 115            | 171            | 229            |            |  |  |  |  |
| AV2       | ↓                   | 17                        | 66       | 116            | 172            | 230<br>231     |            |  |  |  |  |
| AV3       | ↓                   | 18                        | 67       | 117            | 173<br>174     | 232            |            |  |  |  |  |
| AV4       | ↓                   | 19                        | 68       | 118            | 175<br>176     | 233            |            |  |  |  |  |
| AV5       | ↓                   | 20                        | 69       | 119<br>120     | 177<br>178     | 234            |            |  |  |  |  |
| AV6       | ↓                   | 21                        | 70       | 121            | 179            | 235            |            |  |  |  |  |
| AL1       | ↓                   | 22                        | 71       | 122            | 180            | 236            |            |  |  |  |  |
| AL2       | ↓                   | 23                        | 72       | 123            | 181            | 237            |            |  |  |  |  |
| AL3       | ↓                   | 24                        | 73       | 124            | 182            | 238            |            |  |  |  |  |
| AL6       | ↓                   | 25                        | 74<br>75 | 125            | 183<br>184     | 239            |            |  |  |  |  |
| AL7       | ↓                   | 26                        | 76       | 126            | 185            | 240            |            |  |  |  |  |
| AL11      | ↓                   | 27                        | 77       | 127            | 186            | 241            |            |  |  |  |  |
| Δ P       | 3.5Kpsi/V<br>15K#/V | --                        | --       | 128            | 187            | 242            |            |  |  |  |  |
| AL4       | 1Gp/V<br>15K#/V     | 28                        | 78       | 129            | 188            | 243            |            |  |  |  |  |
| AL5       | ↓                   | 29                        | 79<br>80 | 130            | 189            | 244<br>245     |            |  |  |  |  |
| AL8       | ↓                   | 30                        | 81       | 131            | 190            | 246            |            |  |  |  |  |
| AL9       | ↓                   | 31<br>32                  | 82       | 132            | 191<br>192     | 247            |            |  |  |  |  |
| AL10      | ↓                   | 33                        | 83       | 133<br>134     | 193            | 248<br>249     |            |  |  |  |  |
| AL12      | ↓                   | 34                        | 84       | 135<br>136     | 194            | 250            |            |  |  |  |  |
| DL1       | 0.5"/V<br>15K#/V    | 35                        | 85       | 137<br>138     | 195            | 251            |            |  |  |  |  |
| DL2       | ↓                   | 36                        | 86       | 139            | 196            | 252            |            |  |  |  |  |
| DL3       | ↓                   | 37                        | 87       | 140            | 197            | 253            |            |  |  |  |  |
| DL4       | ↓                   | 38                        | 88       | 141            | 198            | 254            |            |  |  |  |  |
| DL5       | ↓                   | 39                        | 89       | 142            | 199            | 255            |            |  |  |  |  |
| DL6       | ↓                   | 40                        | 90       | 143            | 200            | 256            |            |  |  |  |  |
| DL7       | ↓                   | 41                        | 91       | 144            | 201            | 257            |            |  |  |  |  |
| DL8       | ↓                   | 42                        | 92       | 145            | 202            | 258            |            |  |  |  |  |
| DL9       | ↓                   | 43                        | 93       | 146            | 203            | 259            |            |  |  |  |  |

[illegible]

VOLUME IIRUN 6 TEST DATA

Y-AXIS, 5000 POUND/ACTUATOR TEST LEVEL,  
ACTUATORS 180° OUT OF PHASE



1 HEADING: TRAIN TRACK TRANSFER 5000 LB TEST 3/18/75

SWEEP PARAMETERS:

2 MODE 1=LOG, 0=LIN: 1.  
 3 TYPE 1=UNI-DIRECTIONAL, 0=BI-DIRECTIONAL: 1.  
 4 START, END FREQ, HZ: .5 50.  
 FREQ RANGE -- OCTAVES, DECADES: 6.644 2.  
 5 SPECIFICATION 1=RATE, 0=DURATION: 1.  
 6 UNITS 1=OCT/MIN, 0=DEC/MIN: 1.  
 7 RATE, OCT/MIN: 2.  
 SWEEP DURATION -- MIN, SEC: 3. 19.

TEST LENGTH:

8 SPECIFICATION 1=TIME, 0=SWEEP CYCLES: 0.  
 9 CYCLES: 1.  
 TEST TIME -- HRS, MIN, SEC: 0. 3. 19.

START-UP AND SHUT-DOWN:

10 START-UP TIME, SEC: 120.  
 11 SHUT-DOWN TIME, SEC: .5

VIBRATION LIMITS (P-P):

12 DISPLACEMENT, IN: 5000.  
 13 VELOCITY, IN/SEC: 9999.  
 14 ACCELERATION, G: 450.

REFERENCE CONTROL SPECTRUM:

15 TYPE, VALUE, FREQ, ABORT LIMIT: 2. 60. 1.98 3.  
 16 TYPE, VALUE, FREQ, ABORT LIMIT: 2. 60. 50. 3.  
 17 TEST LEVEL (DB BELOW REF): 6.

ACCELERATION SIGNALS:

18 NR OF SIGNALS: 2.  
 CHANNEL NRS: 1. 2.  
 19 1=PEAK, 0=RMS: 0.  
 20 SENSITIVITY, MV/G: 22.22  
 21 STRATEGY 1=MAX, 0=AVG: 1.

LIMIT SIGNALS:

22 NR OF SIGNALS: 0.

ABORT LINES:

23 NR OF LINES: 0.

ALARM LINES:

24 NR OF LINES: 0.  
 25 1=DUAL-CHANNEL A/D, 0=ACE: 1.  
 26 COMPRESSION SPEED 2=HIGH, 1=NORMAL, 0=LOW: 1.

## POST-TEST DOCUMENTATION

TRAIN TRACK TRANSFER 5000 LB TEST 3/18/75

COMPLETION STATUS: ABORTED DURING SWEEP 1 AT 26.15 HZ.  
CONTROL LIMITS EXCEEDED.

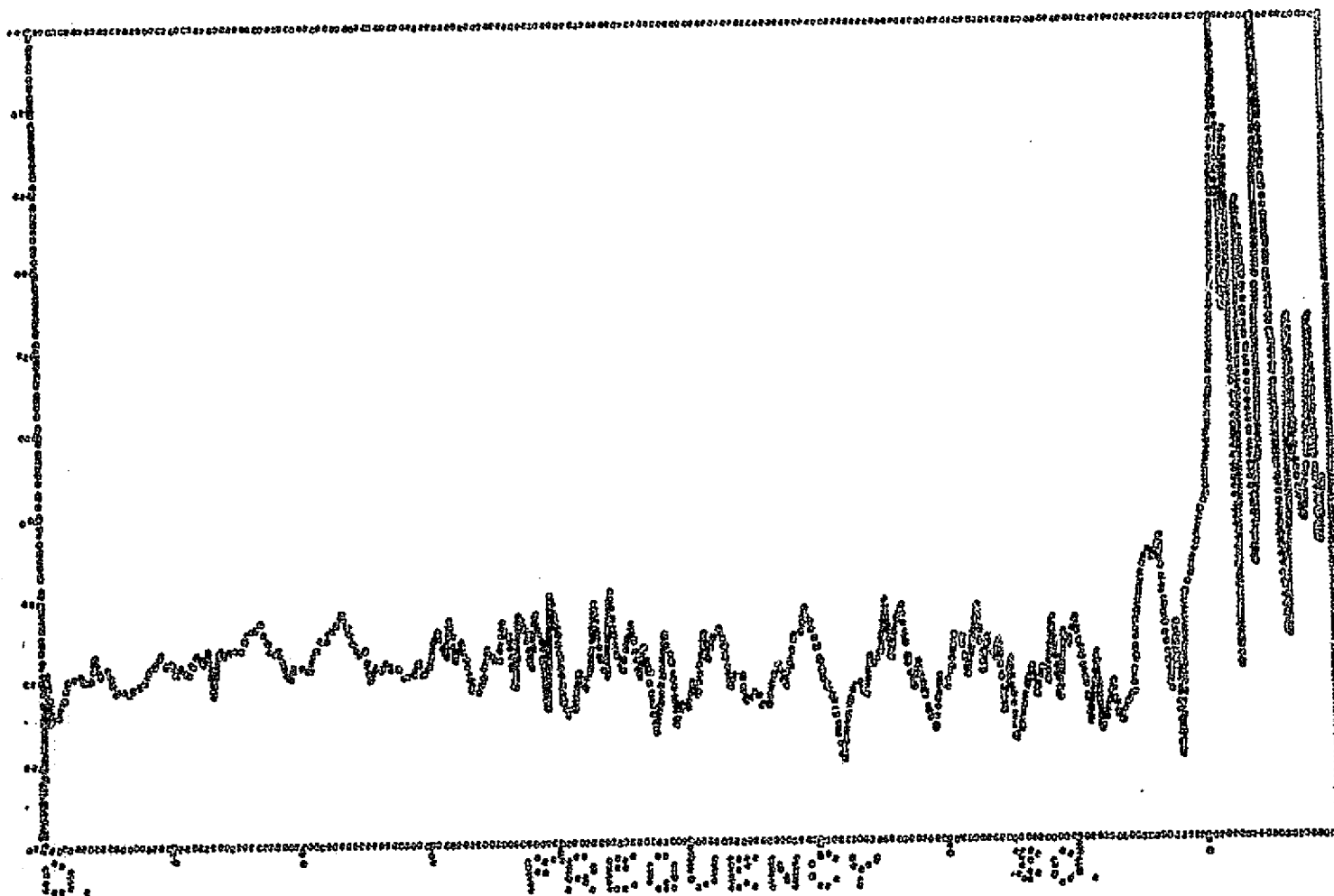
TEST DURATION -- HRS, MIN, SEC: 0 2 51

MAX ABS CONTROL ERROR: 3.259 DB AT 26.12 HZ.  
AVG ABS CONTROL ERROR: .1015 DB.CONTROL  
CHANNEL FREQ RANGE (HZ)

SWEEP 1

|   |       |    |       |
|---|-------|----|-------|
| 2 | .5    | -- | 3.523 |
| 1 | 3.523 | -- | 5.243 |
| 2 | 5.243 | -- | 6.051 |
| 1 | 6.051 | -- | 8.045 |
| 2 | 8.045 | -- | 9.578 |
| 1 | 9.578 | -- | 11.56 |
| 2 | 11.56 | -- | 12.24 |
| 1 | 12.24 | -- | 13.05 |
| 2 | 13.05 | -- | 26.15 |

11:00



COMPLEX

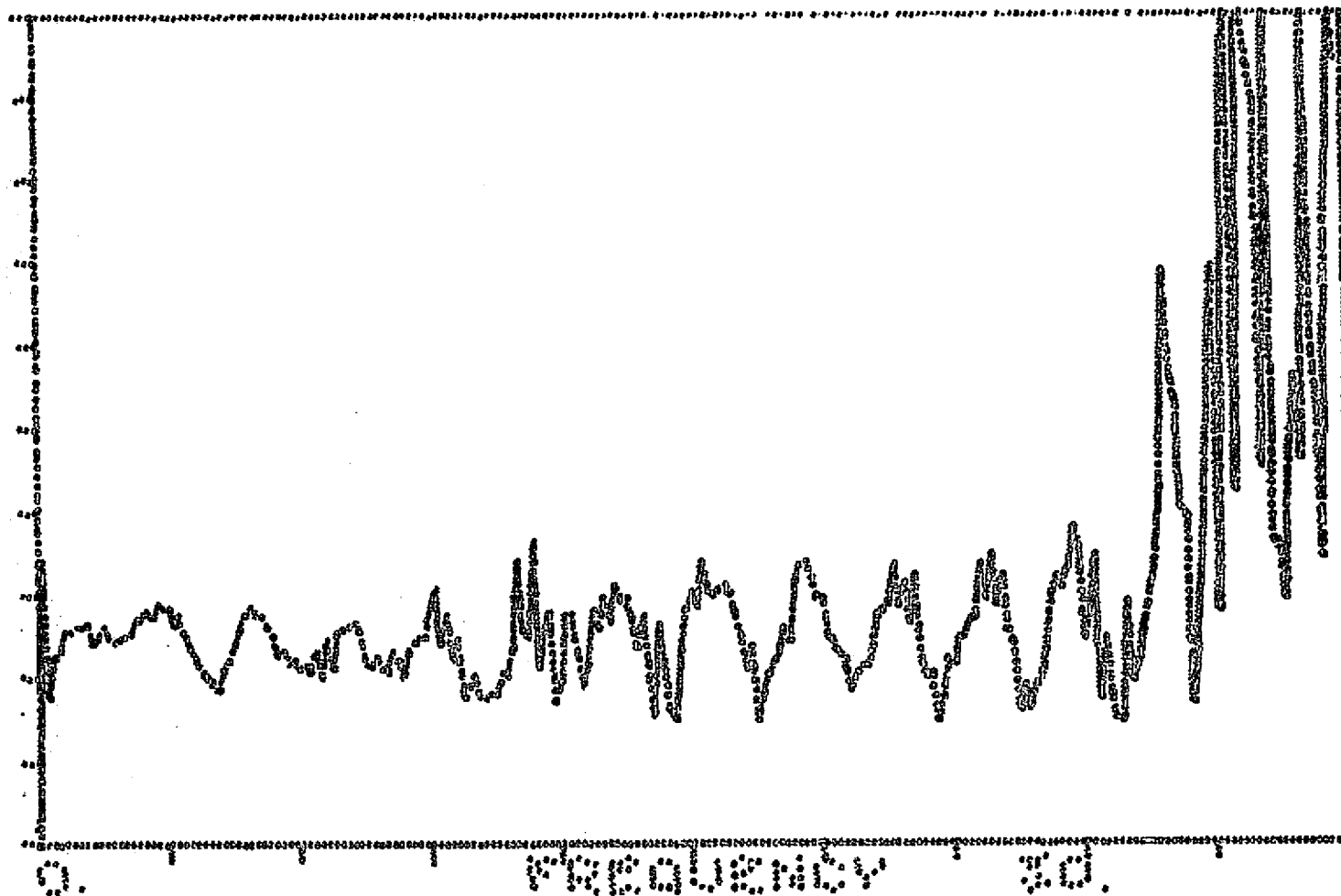
01234 5678

FL1/DRIVE

2.

1980h

0.



COMPLEX

SIZE: 256

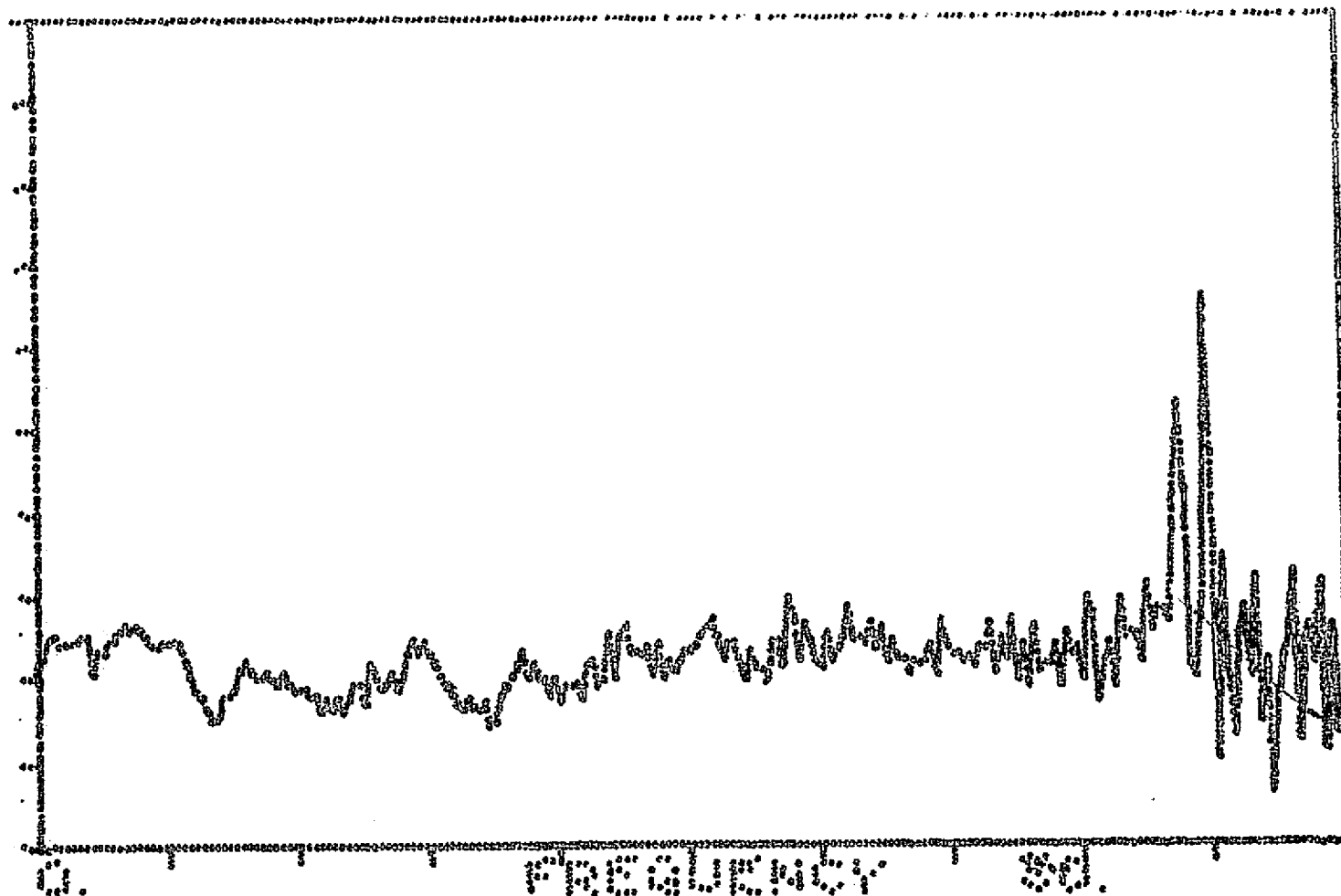
FL2/DRIVE



800  
800  
800

800  
800  
800

800  
800  
800



COMPLEX

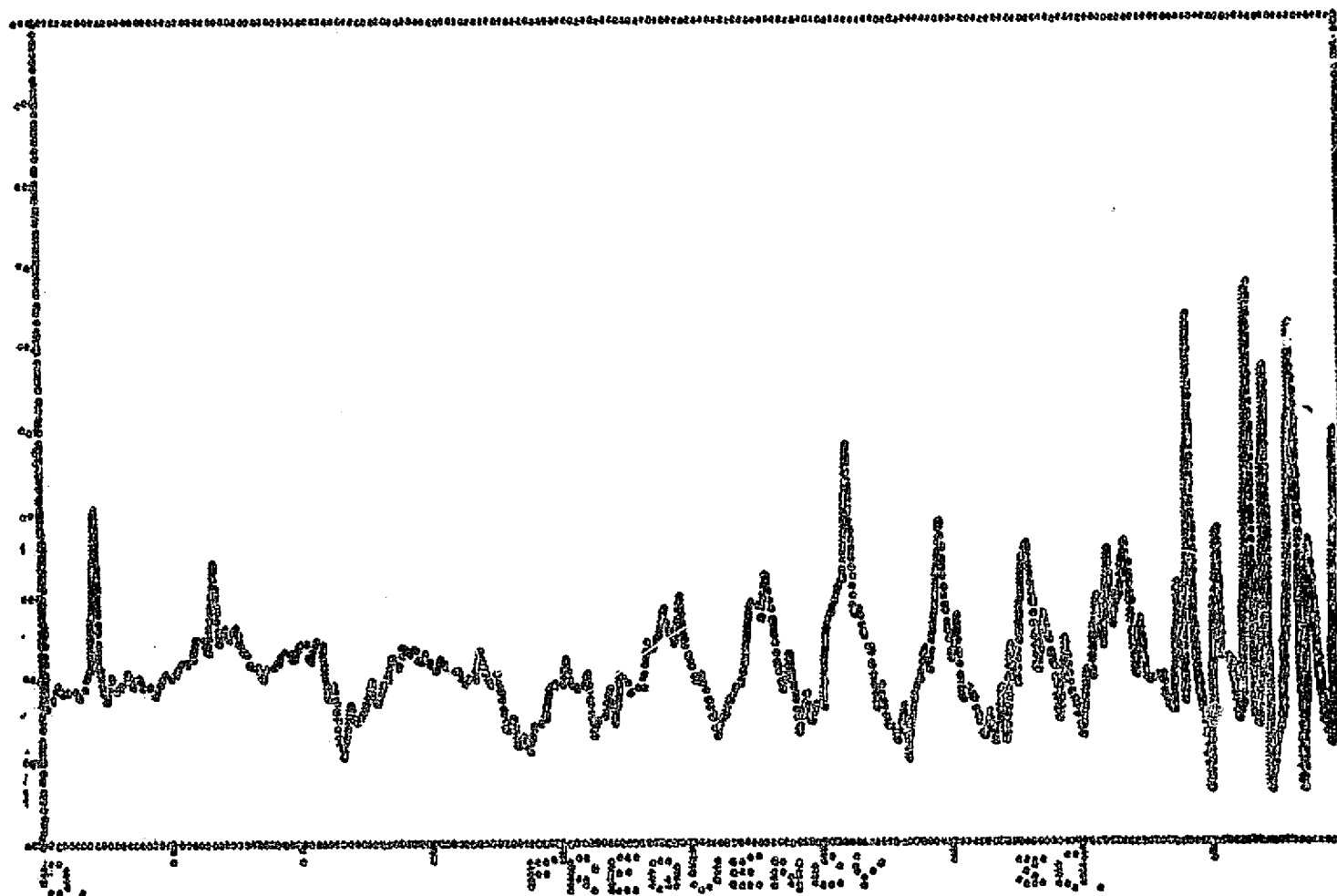
0122 356

FL2/FL1

2.

1000

0.



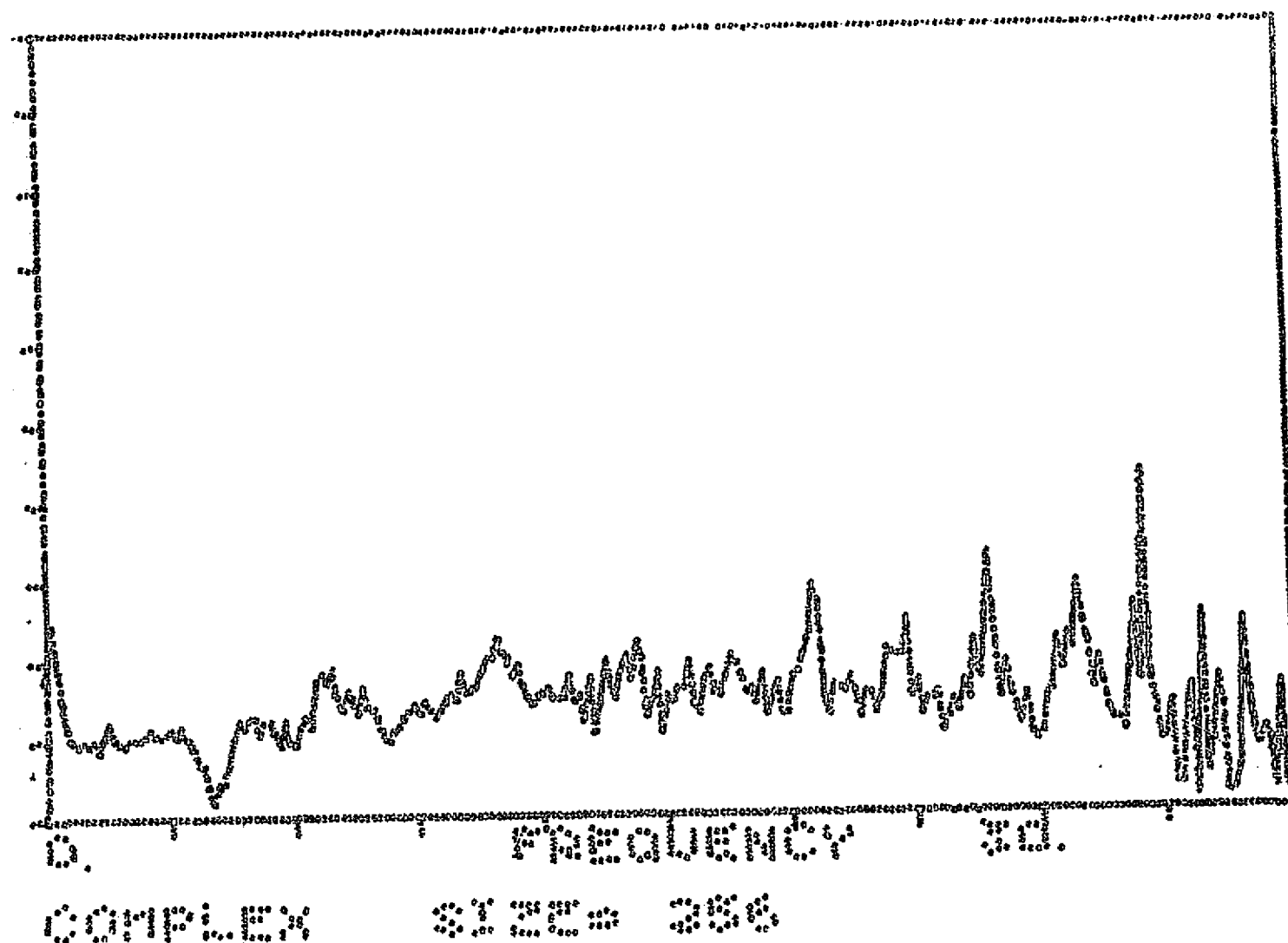
0.000000

0.000000

FV2/FL1

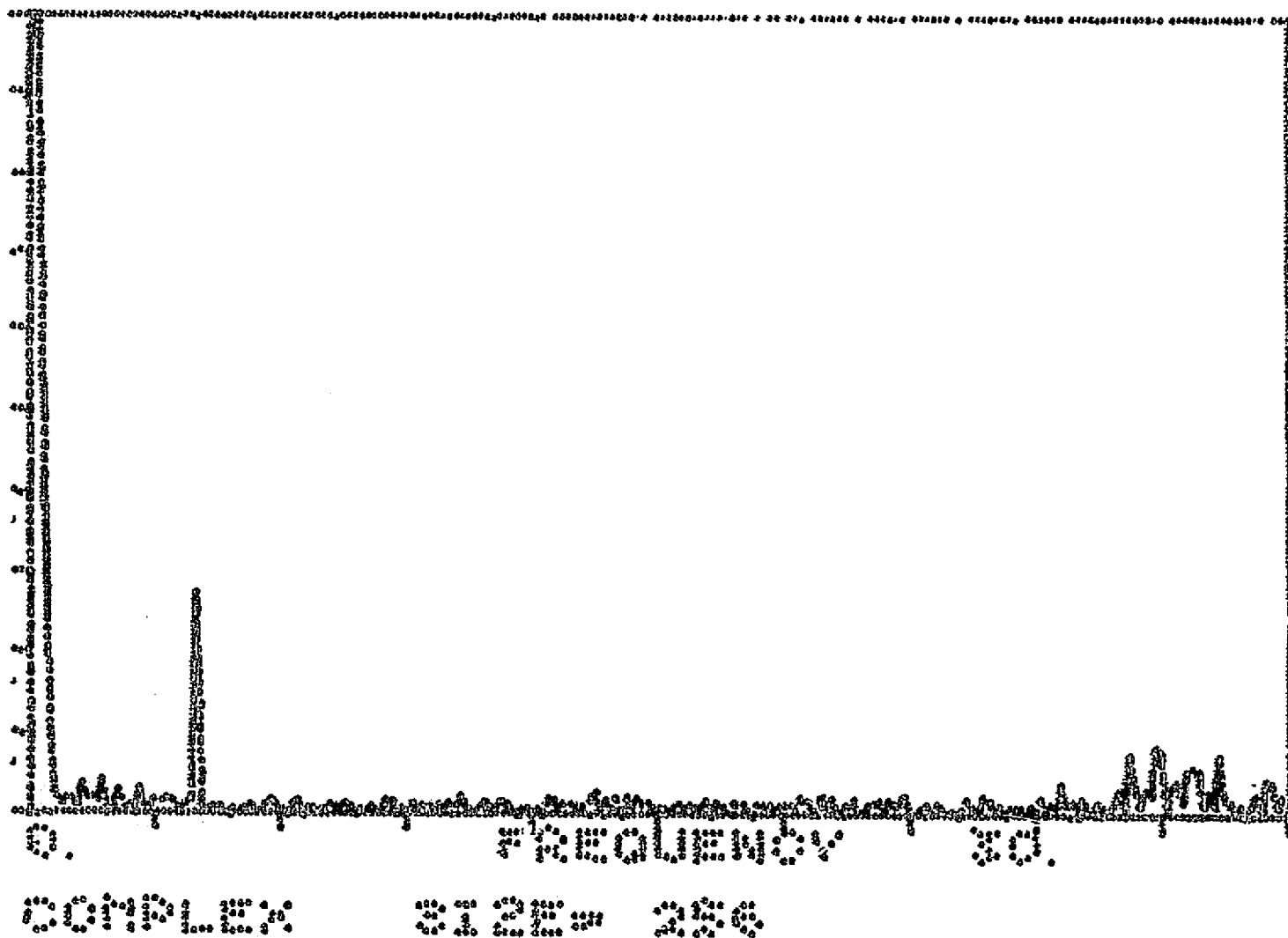
5.

mean



9.

FV3/FL1



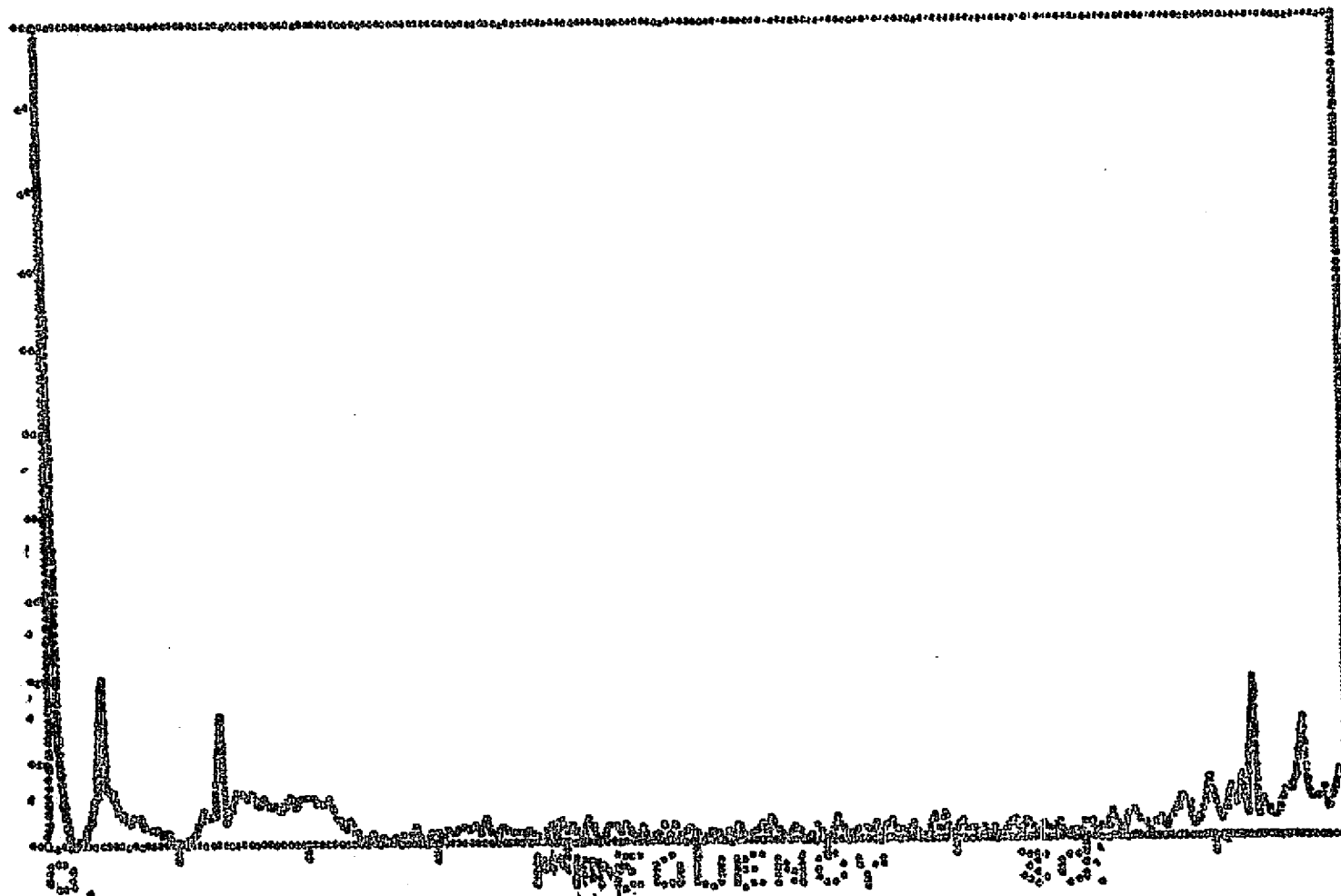




1.

11:00

0.



00:00:00

00:00:00

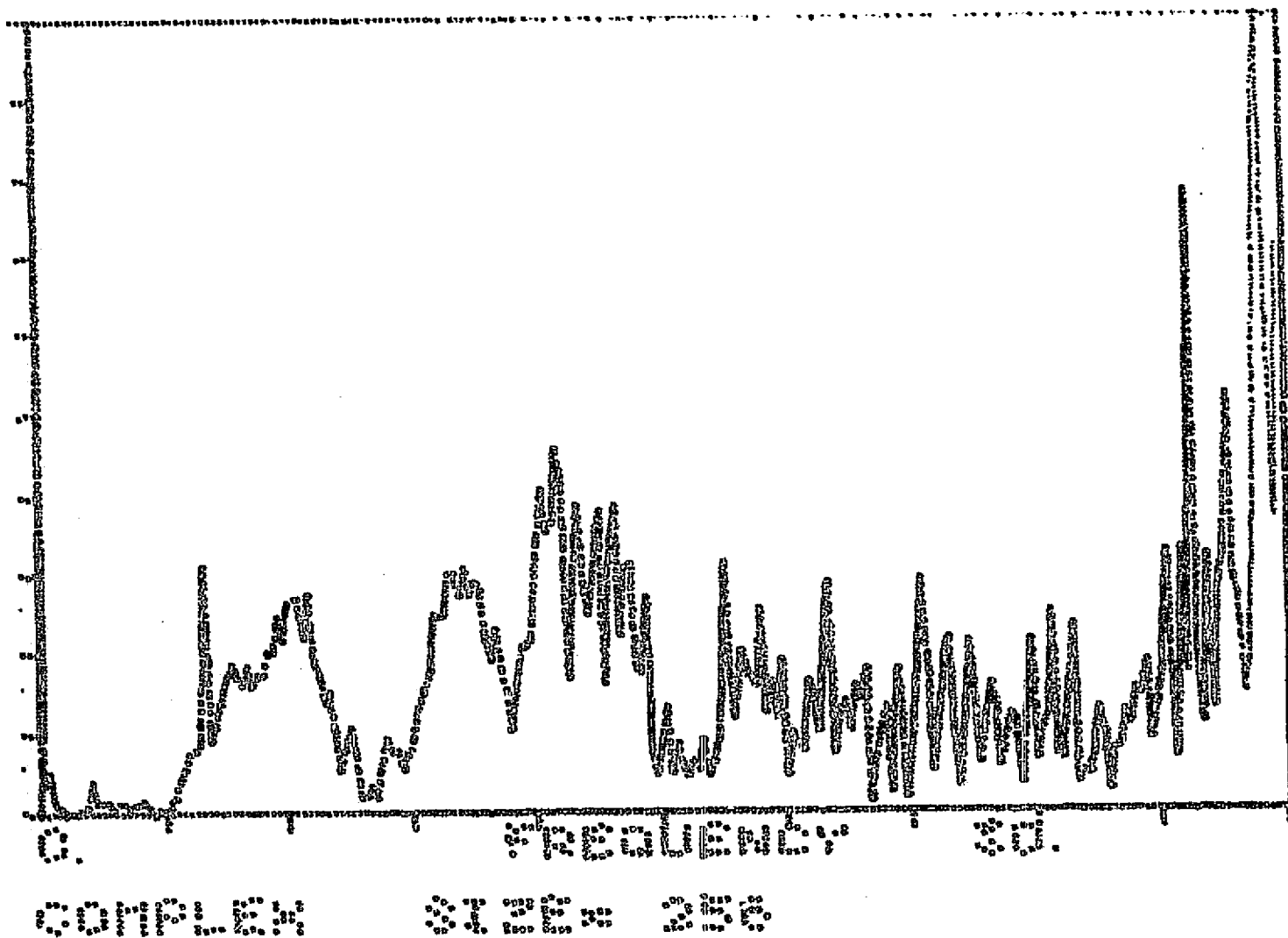
DV3/FL1

0603

[illegible]

30

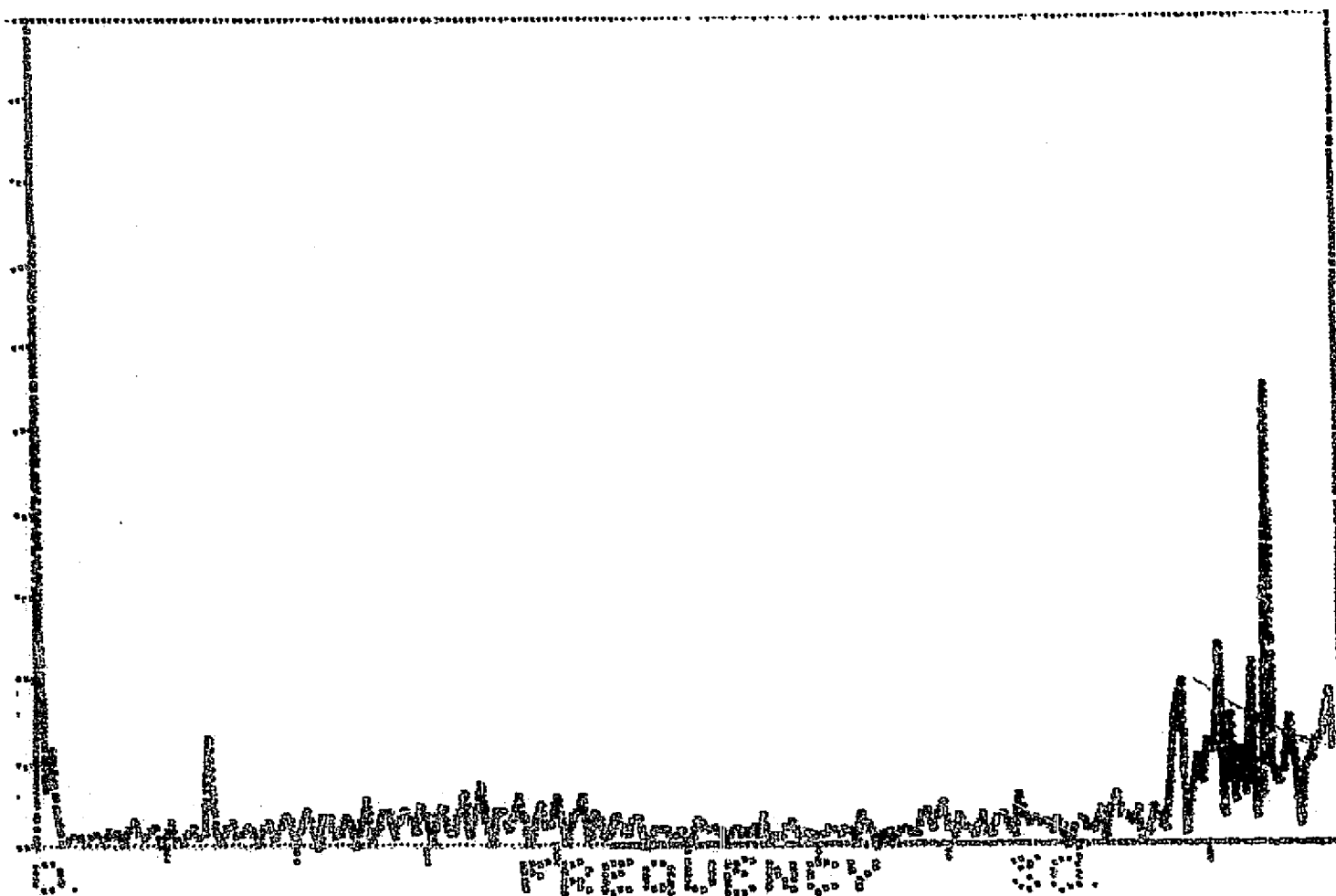
15



AVI/FL1



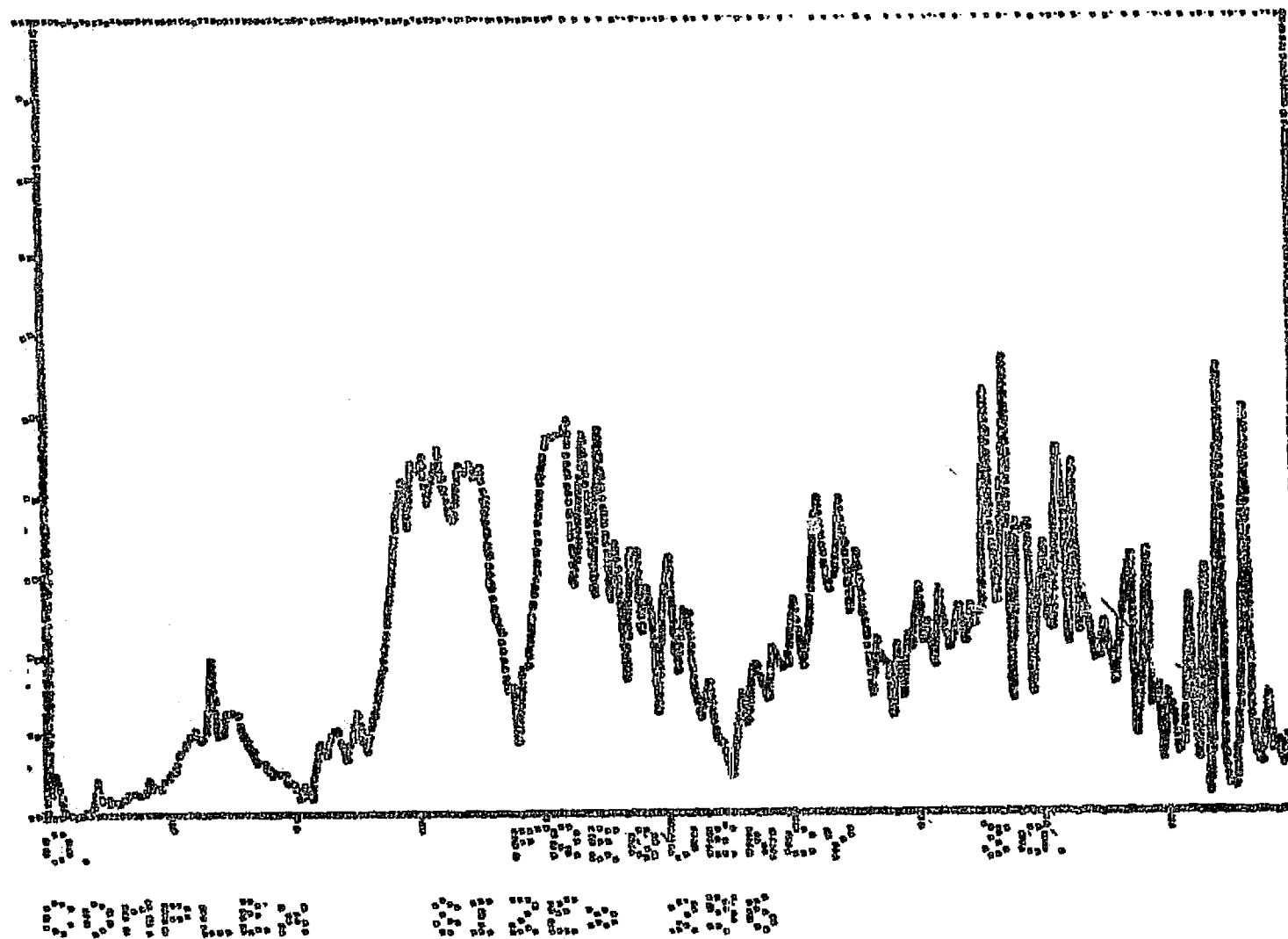
1000



AMPLITUDE

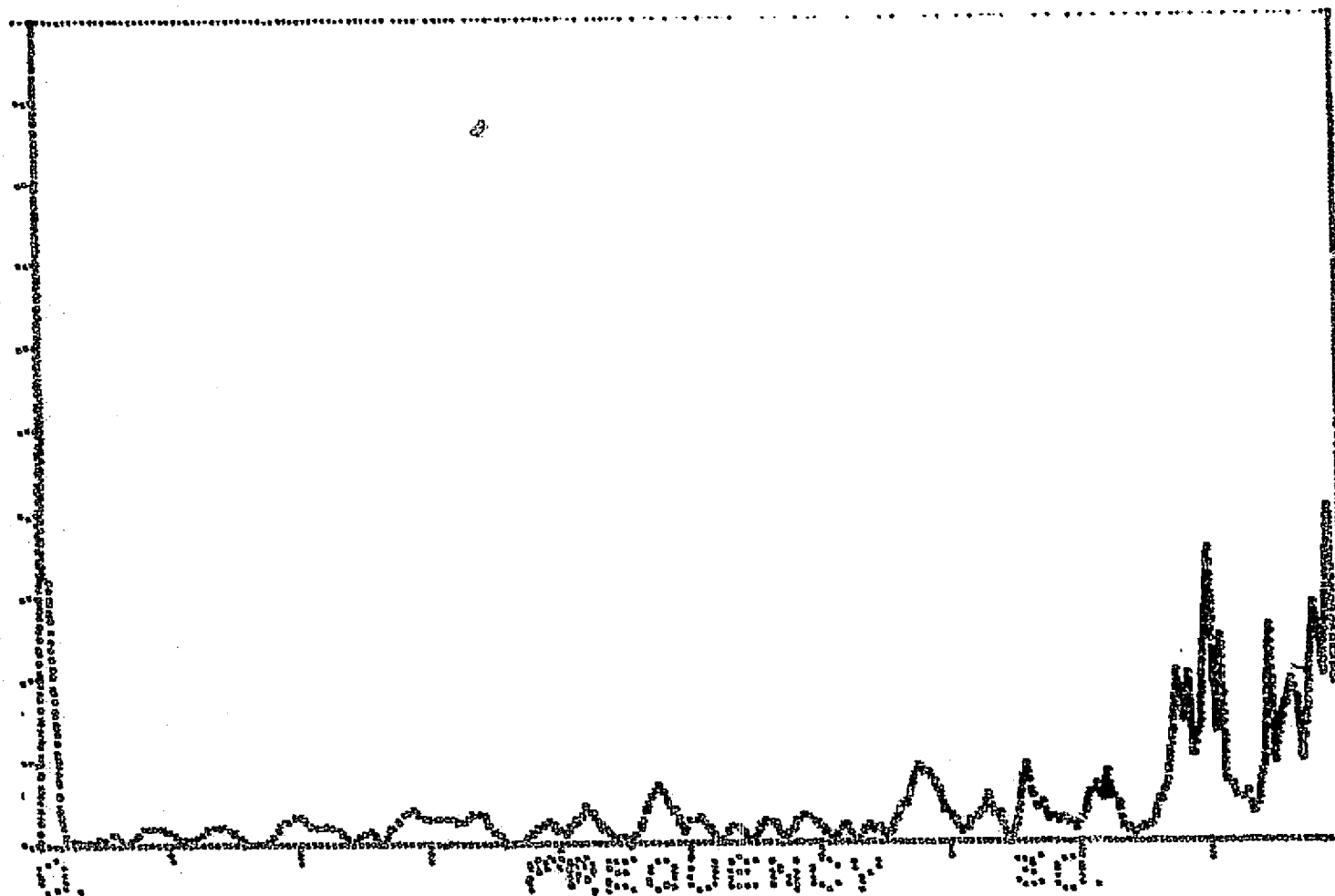
0 25 50

AV2/FL1



05

1954



COMPLEX

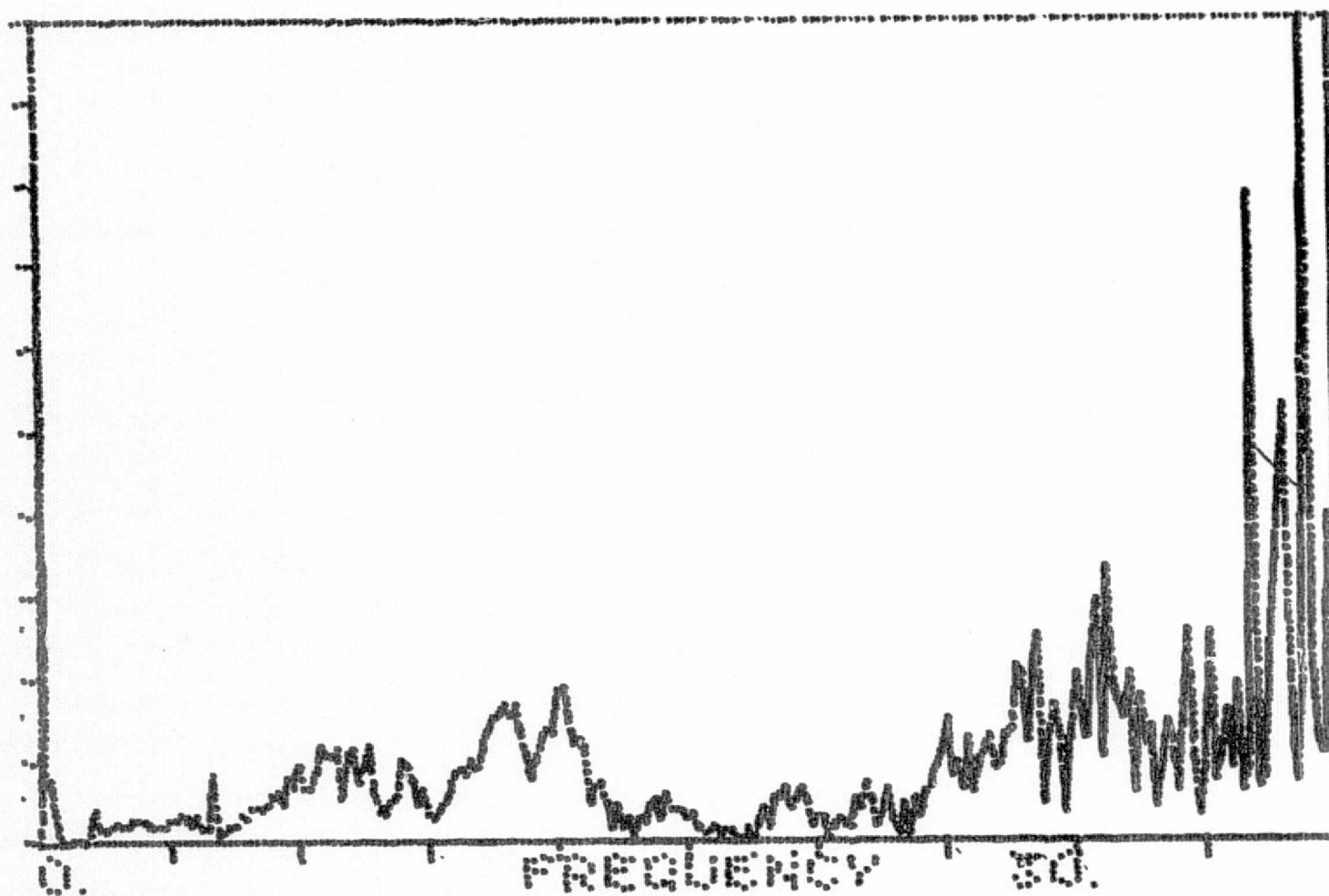
SIZE = 255

AV4/FL1

3.

11604

0.



COMPLEX

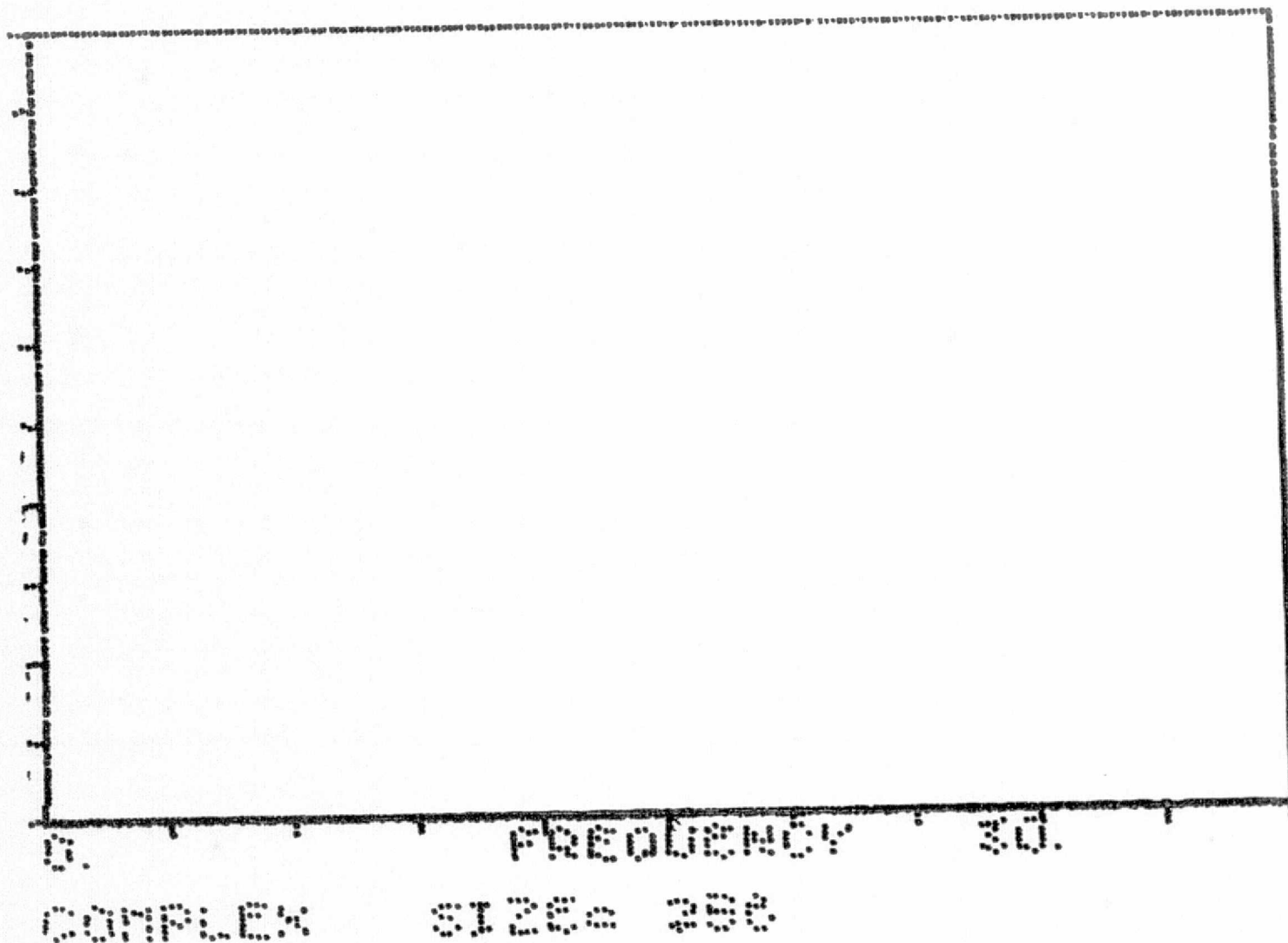
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AV5/FL1

. 0000

MAGN

0.

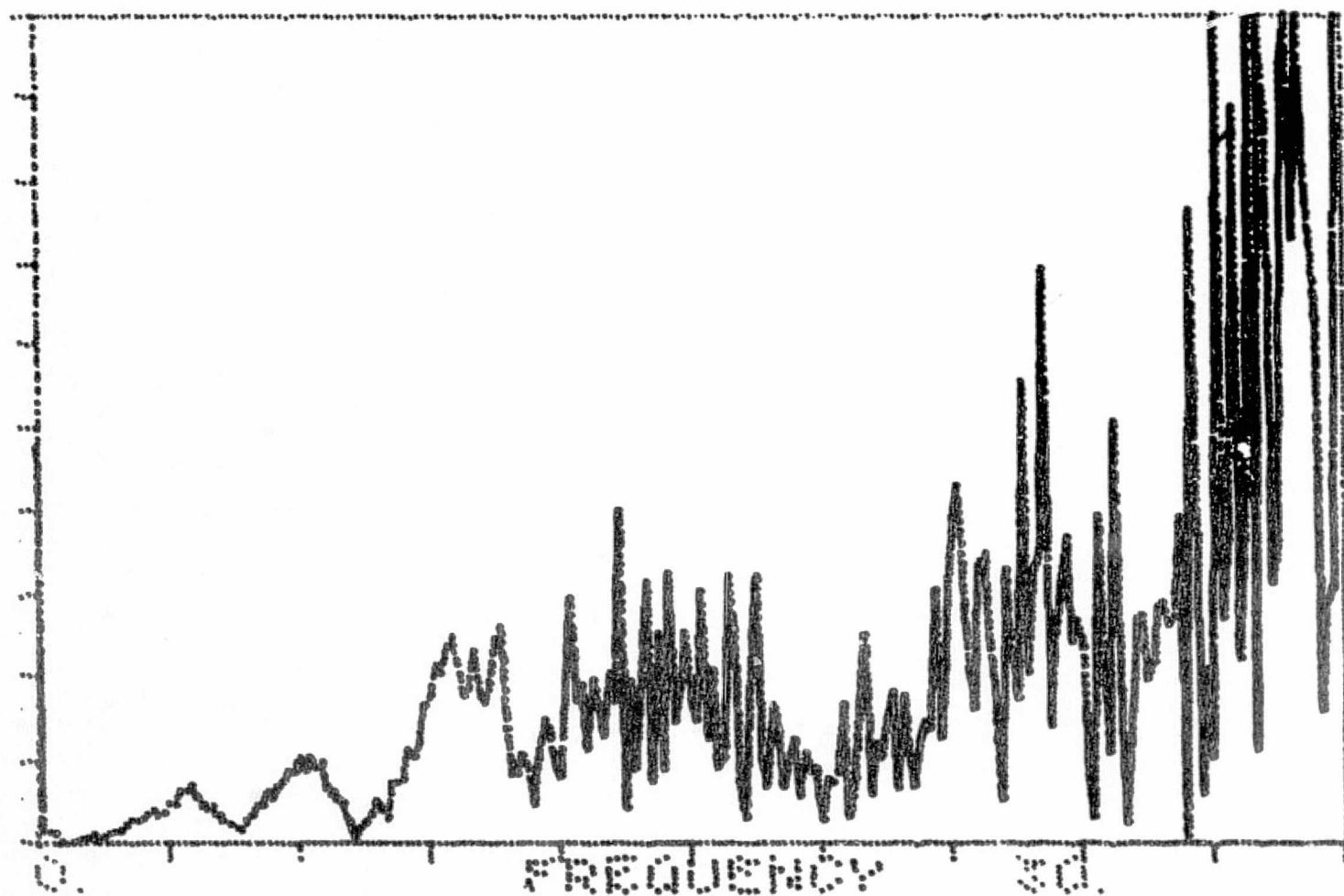


AV6/FL1

2.

MAGN

0.



COMPLEX

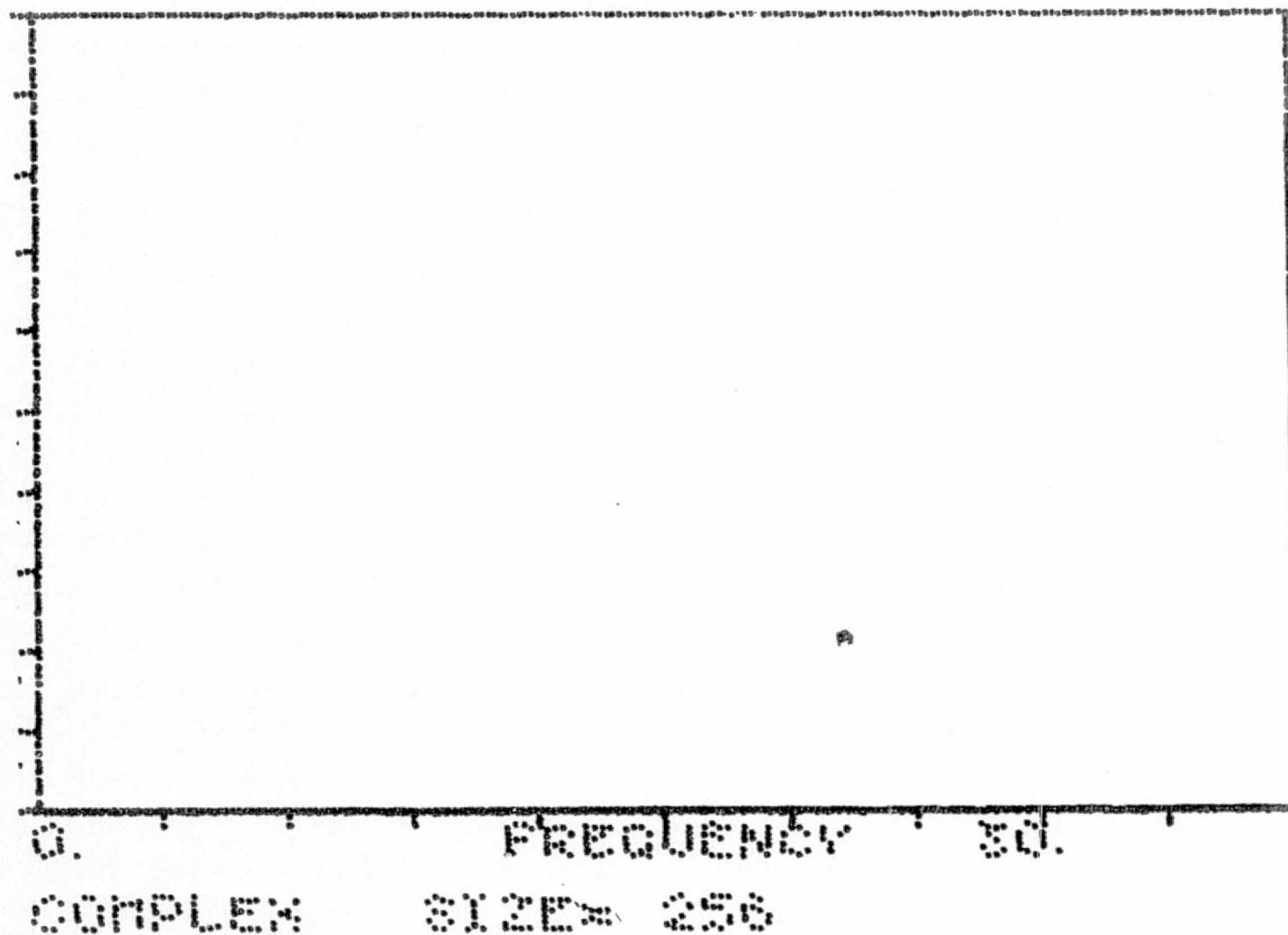
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AL1/FL1

\*\*\*

max

0.

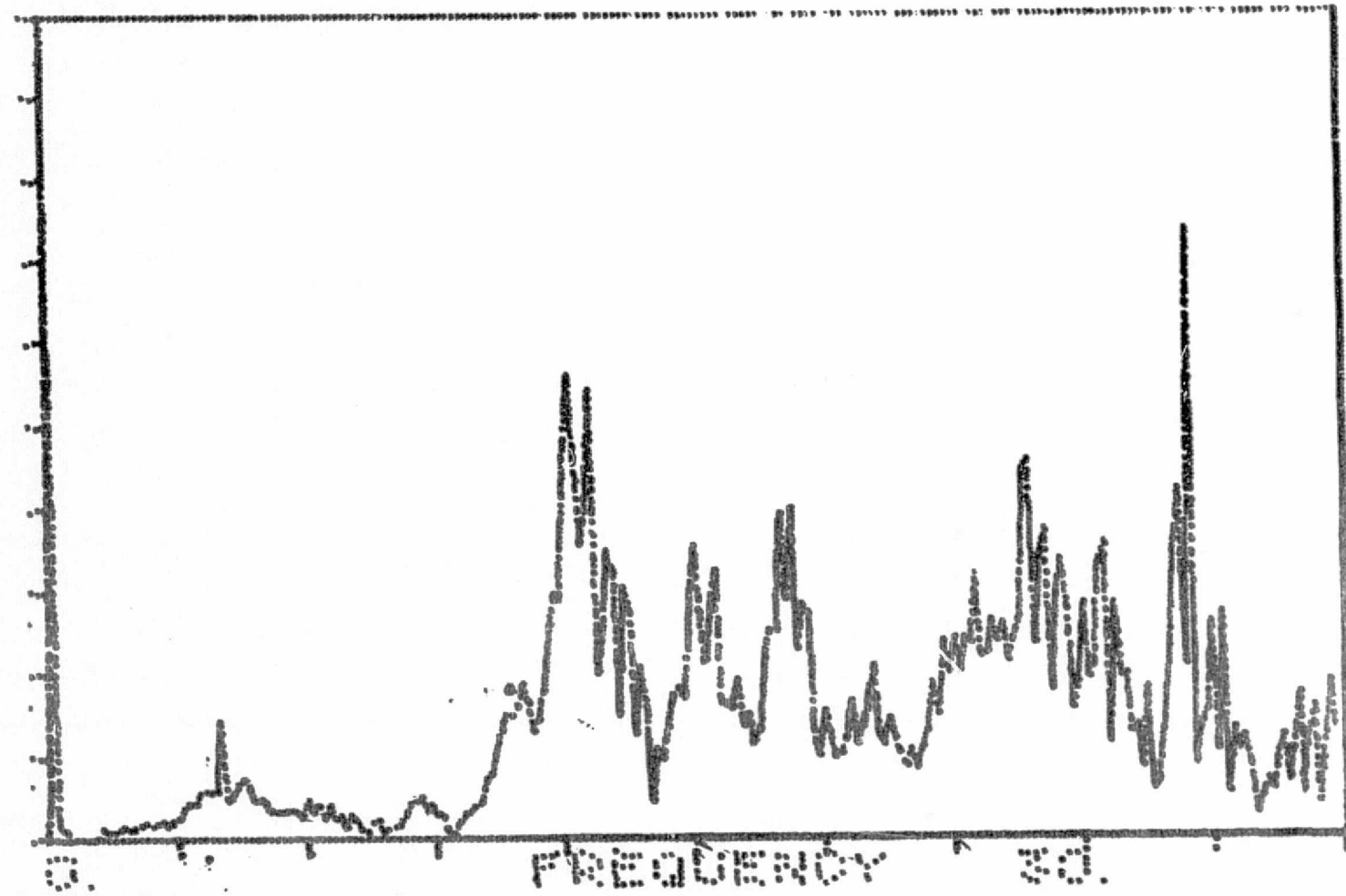


AL2/FL1

3.

11904

0.

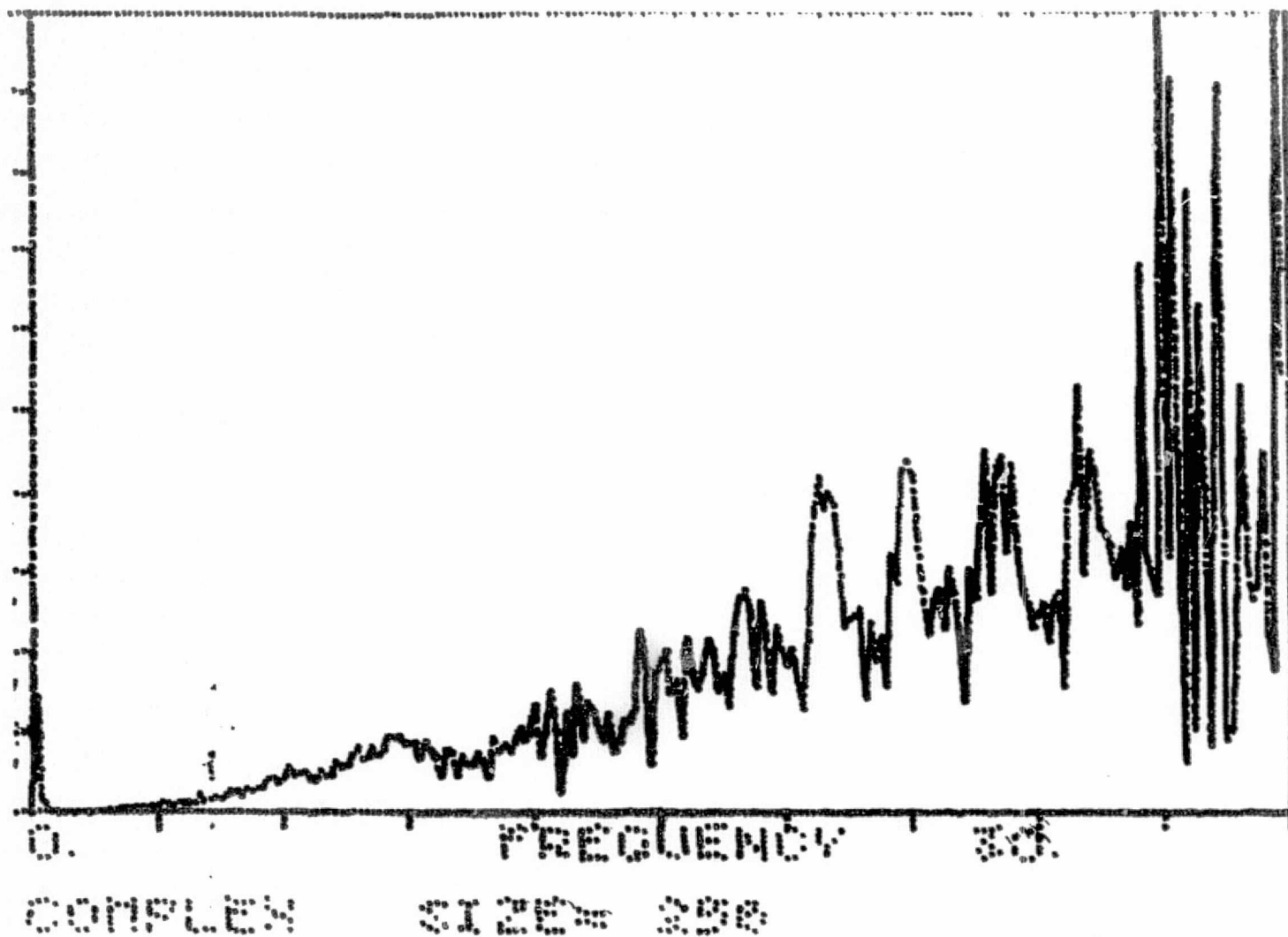


COMPLEX

SIZE= 250

AL3/FL1



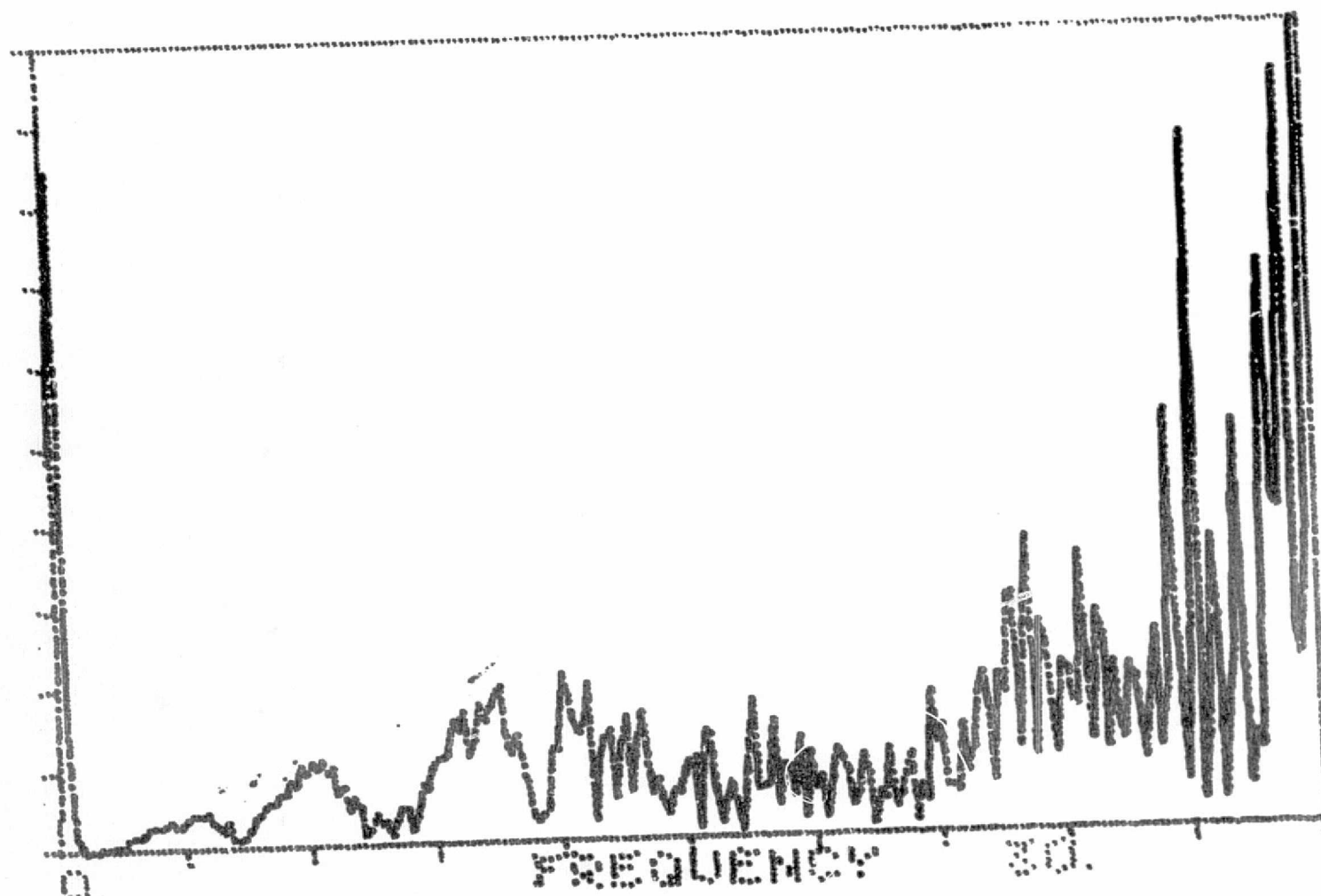


AL6/FL1

2.

HAON

0.



COMPLEX

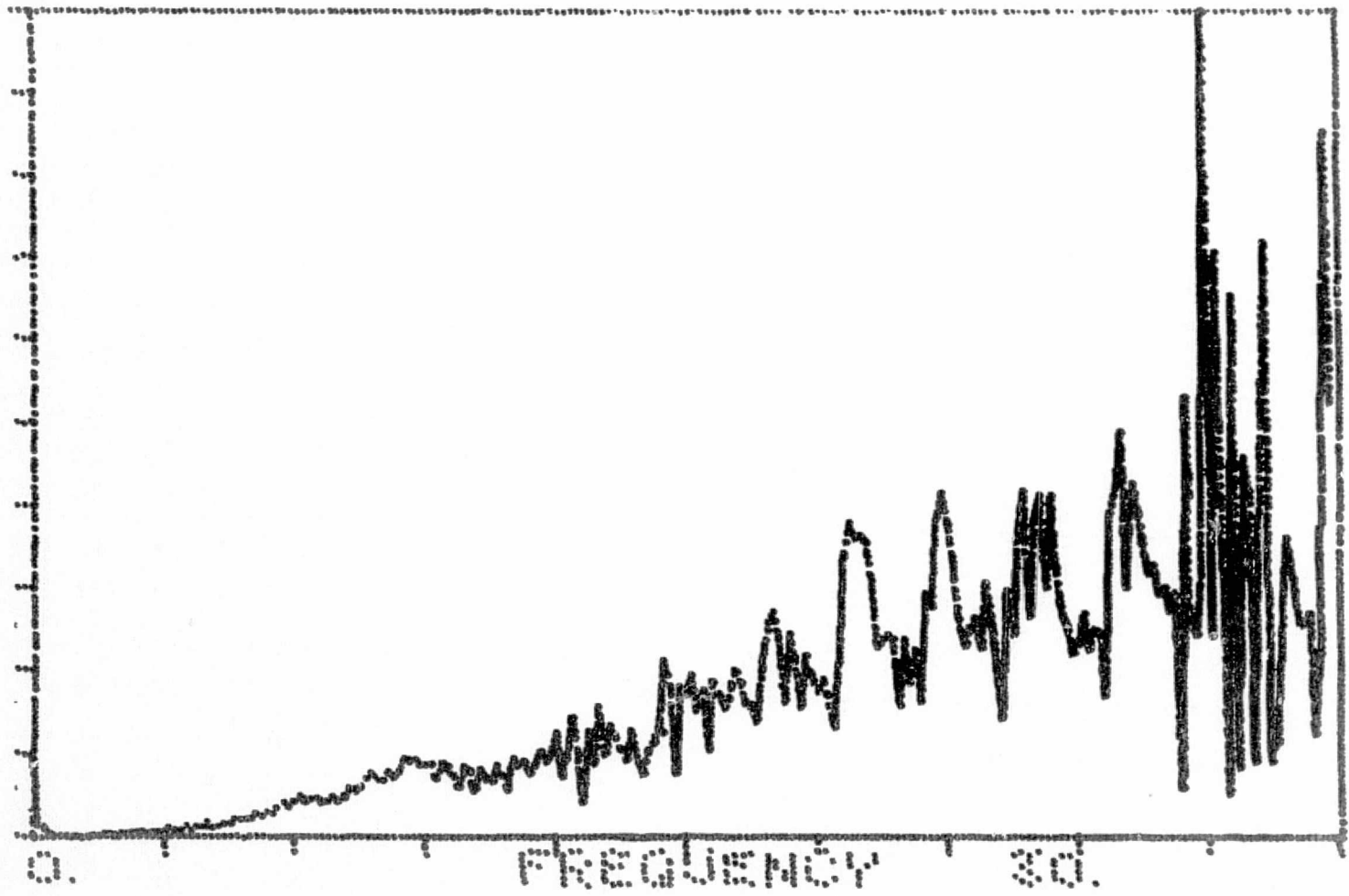
SIZE= 256

AL7/FL1

10.

naon

0.



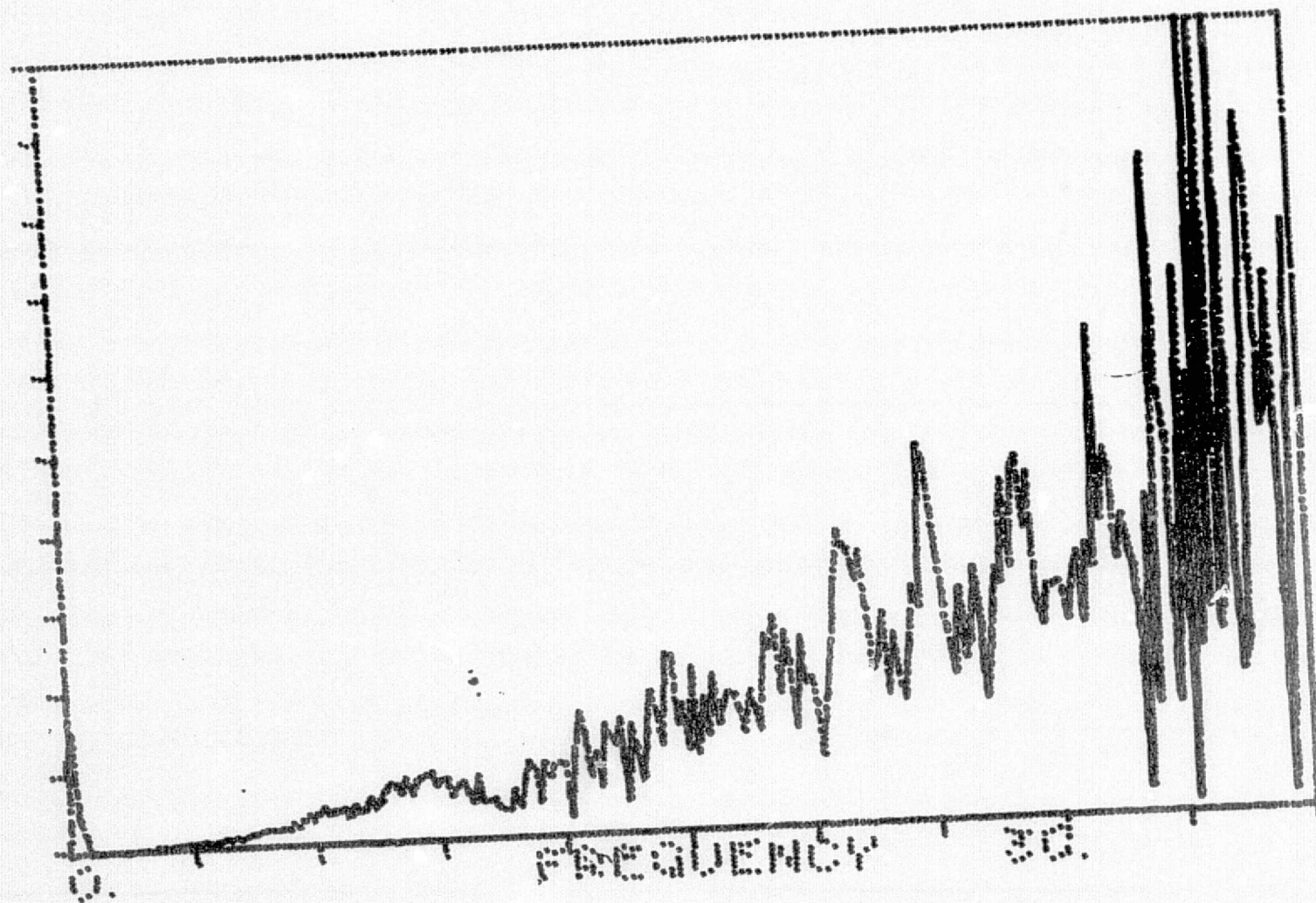
COMPLEX

SIZE= 256

30.

11404

0.



COMPLEX SIZE= 256

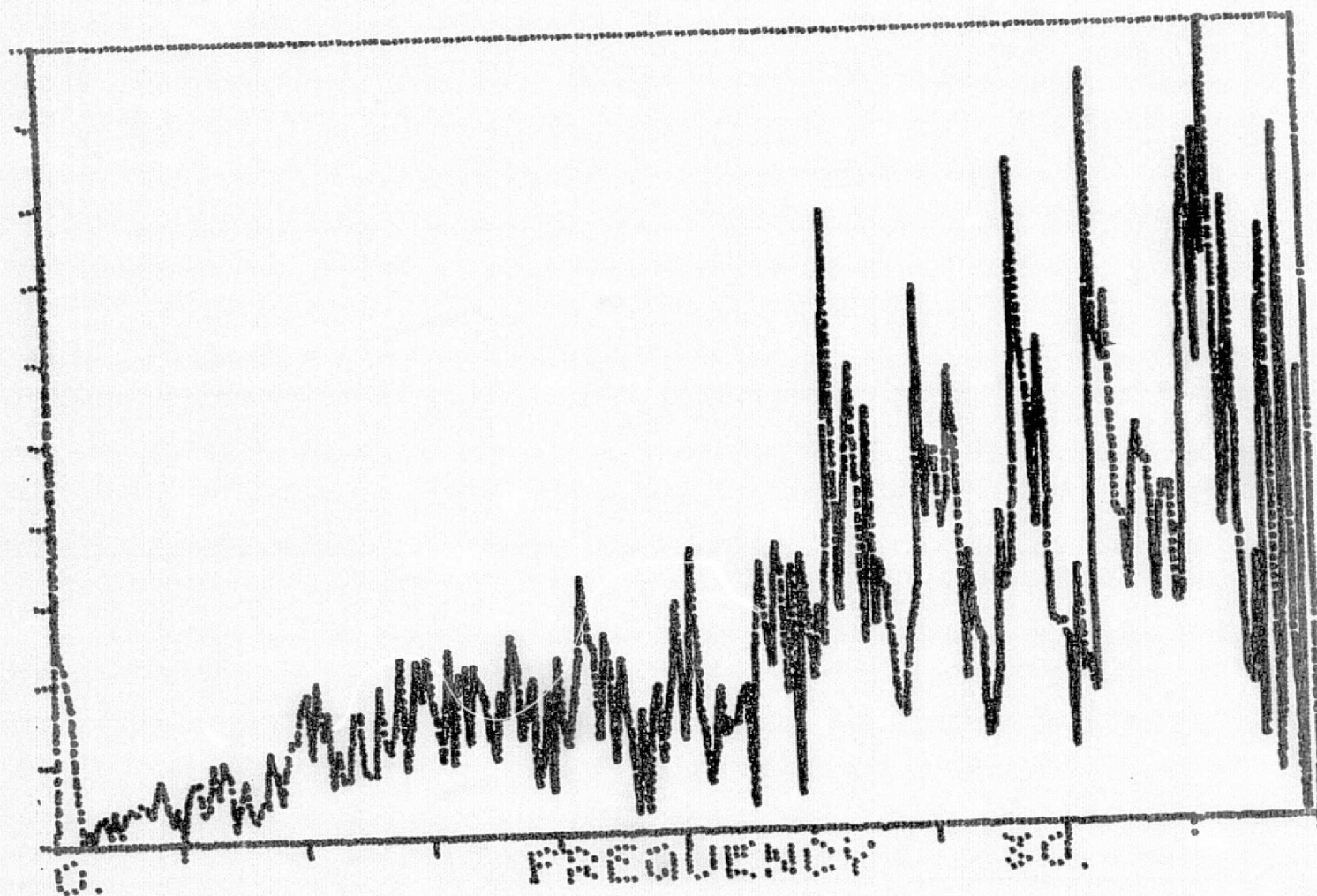
AL4/FL1



10.

1968

0.



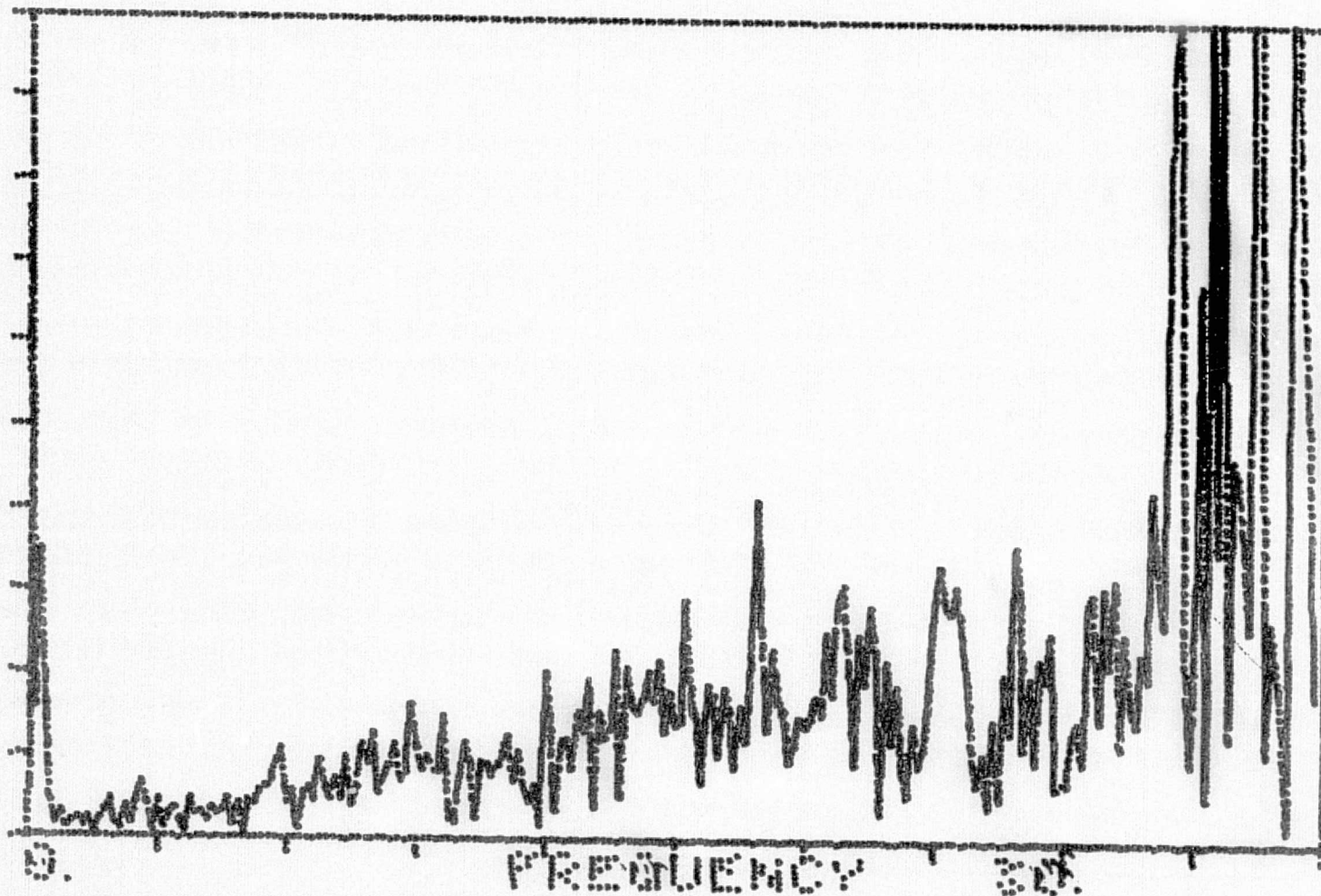
COMPLEX

SIZE 256

AL5/FL1

10.

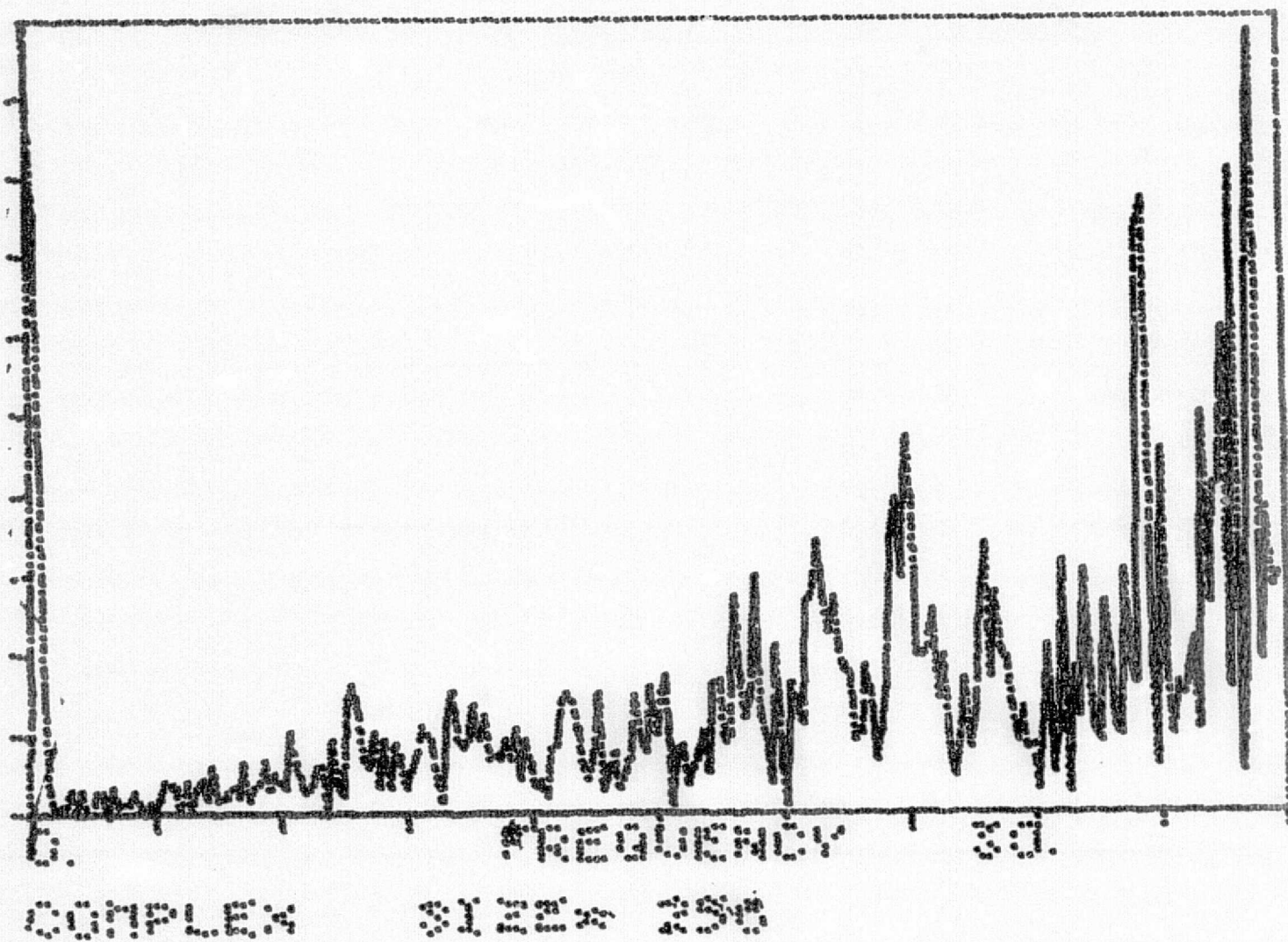
11004



COMPLEX

8122- 250



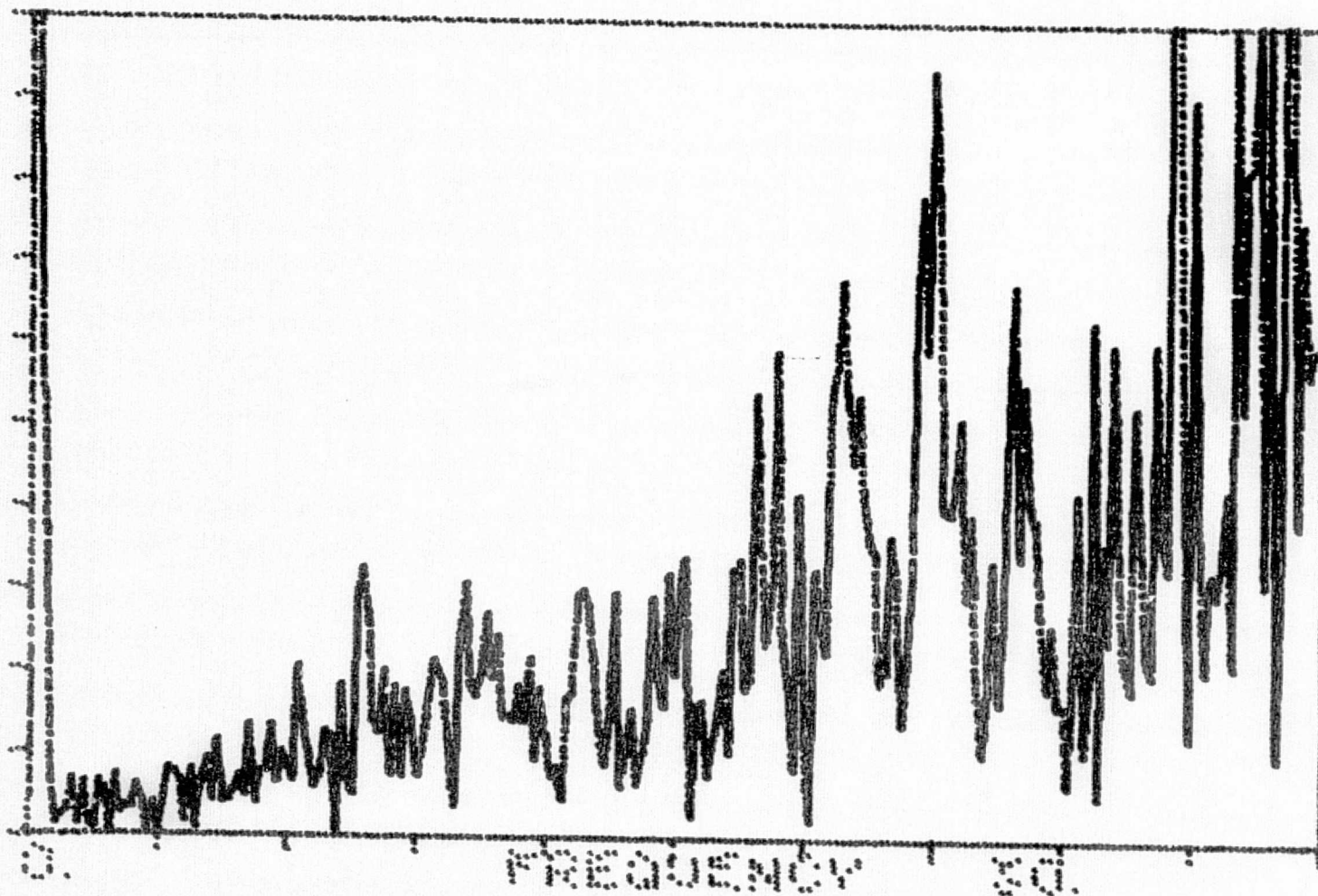


AL9/FL1

10.

1990

0.



COMPLEX

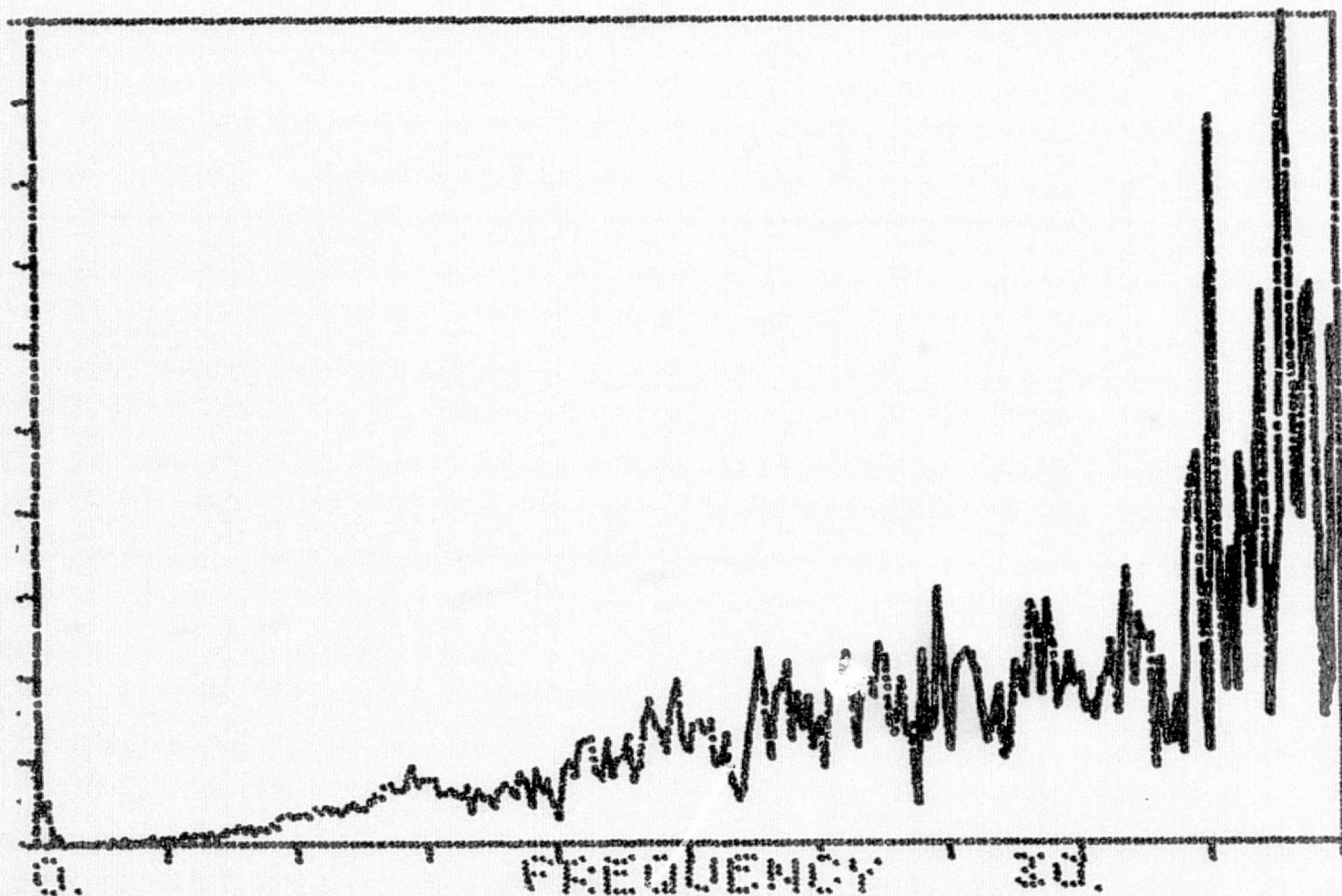
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10.

mag

0.



COMPLEX

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0.

FROM

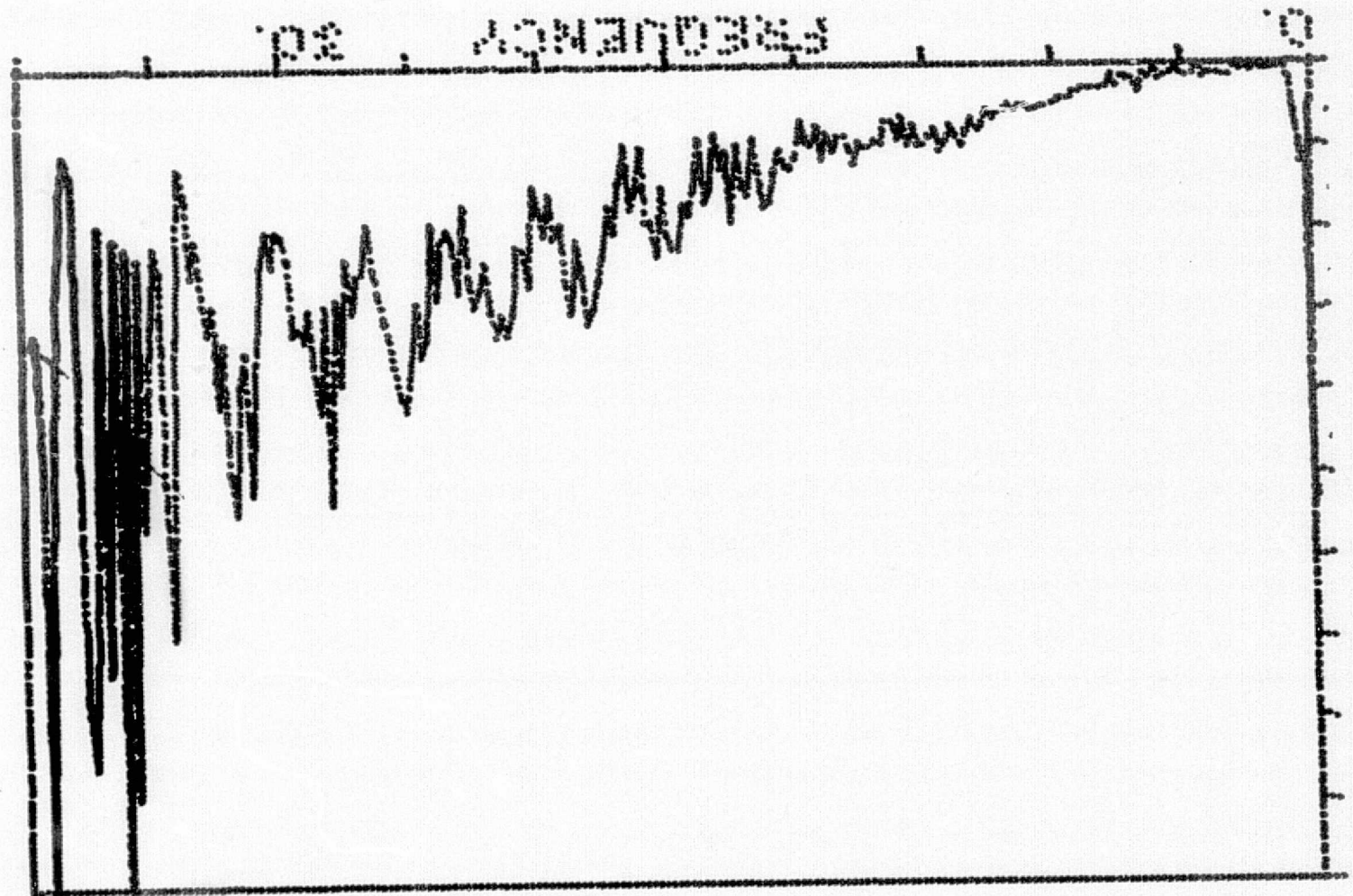
TO

COMPLEX

SIZE = 256

Frequency

AL12/FL1

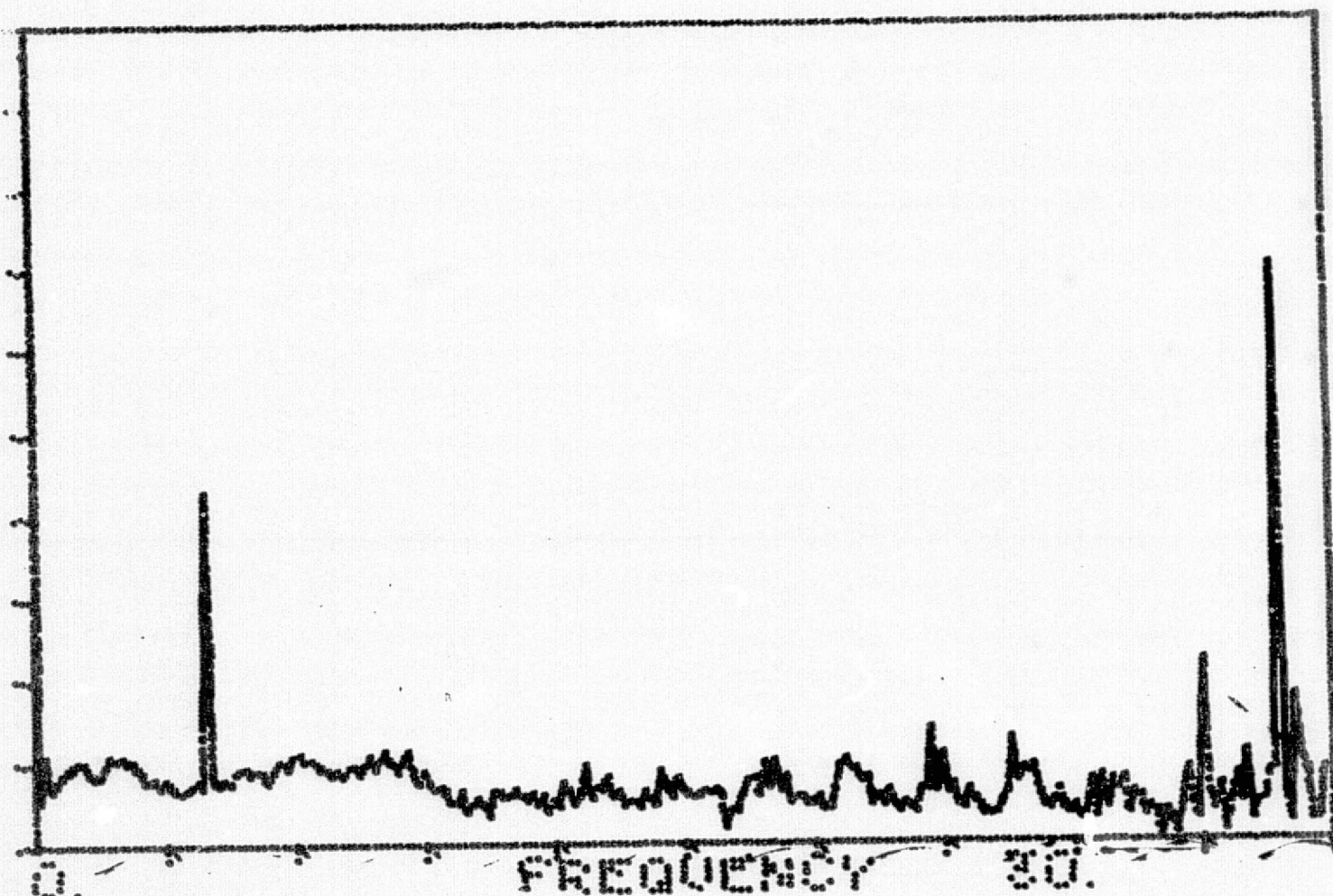




1.

MAGN

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COMPLEX

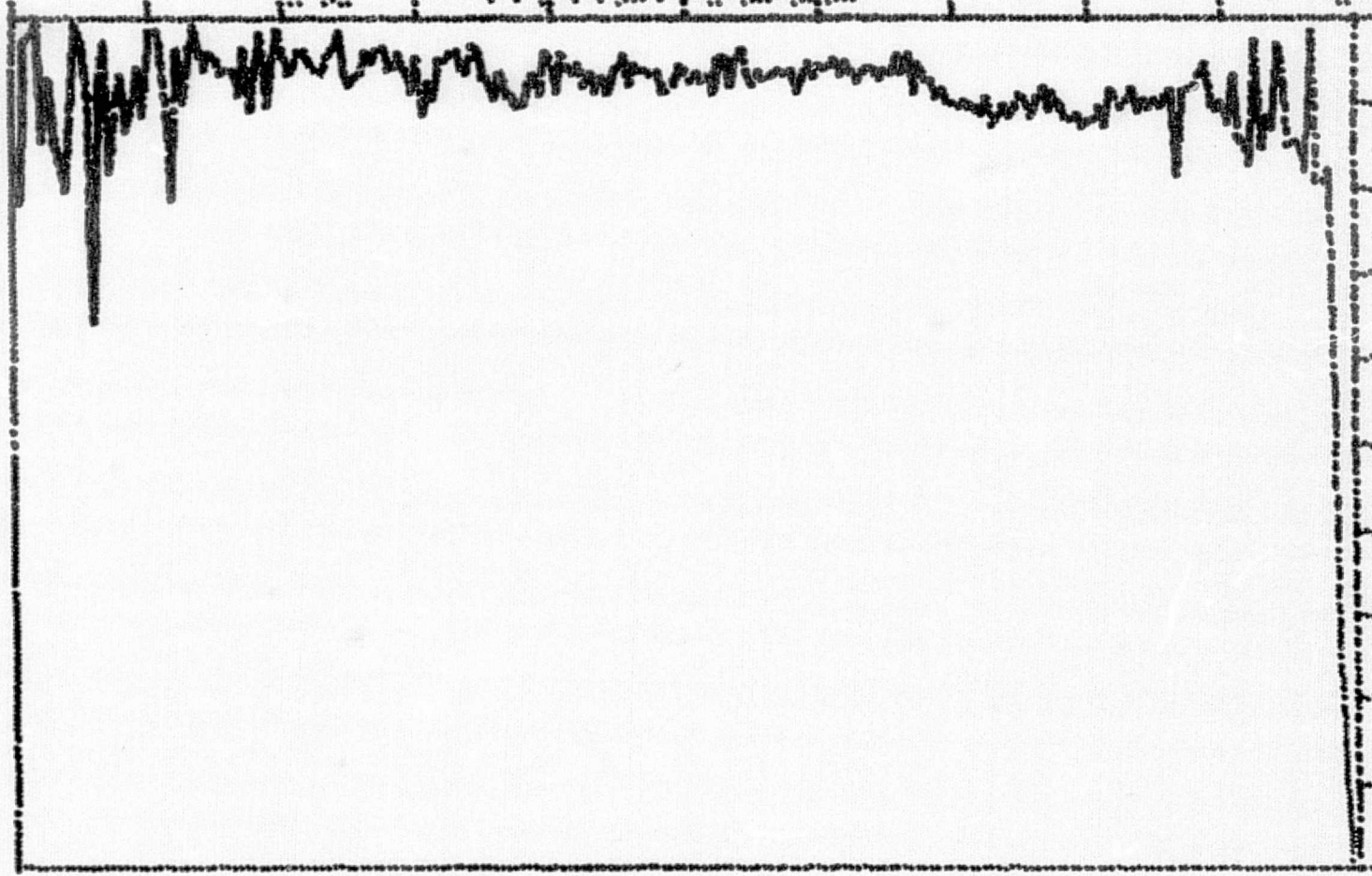
SIZE= 298

DL1/FL1

DL2/FL1

complex size 358

frequency 30



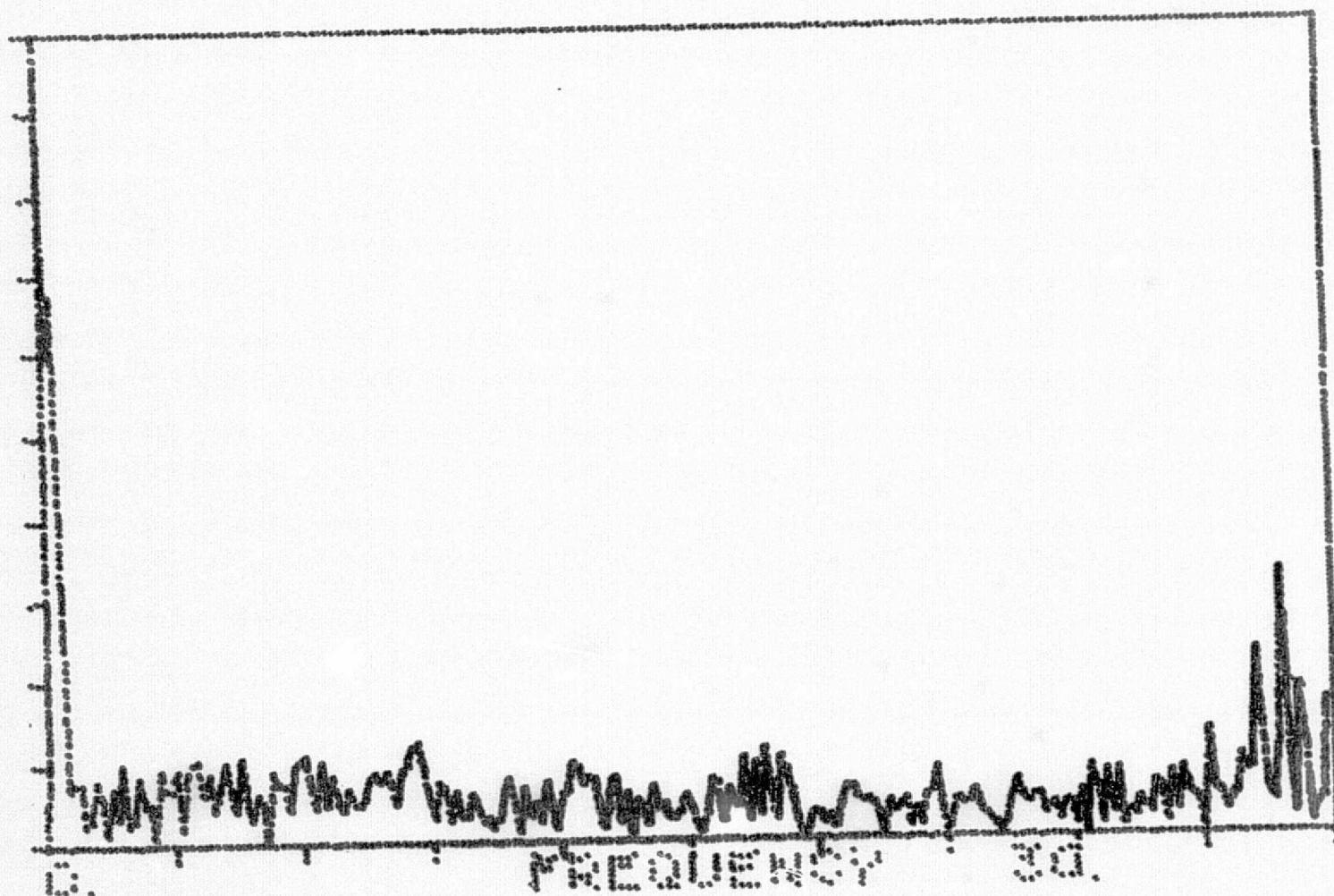
NOB4

1



5  
mag

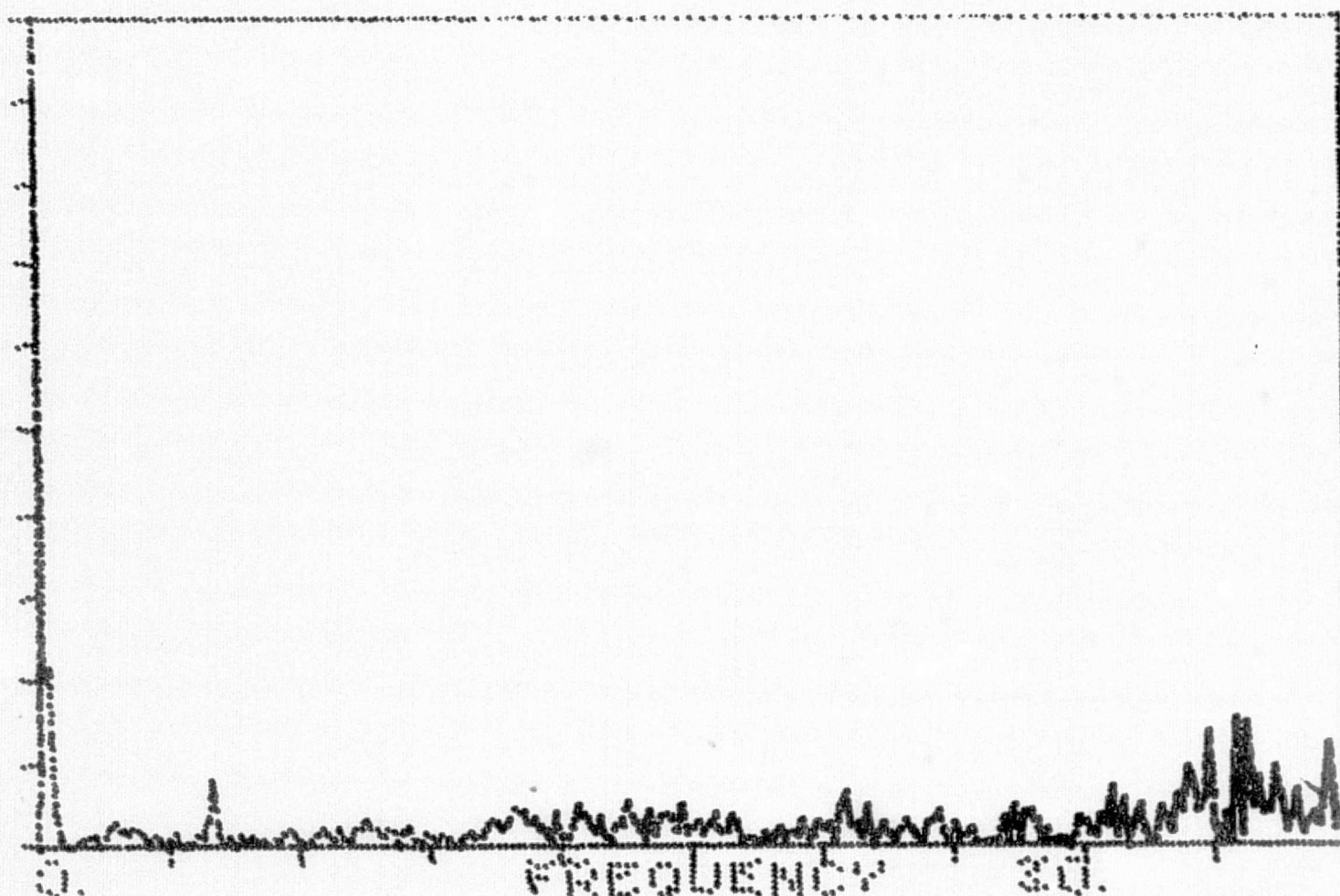
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complex

size 256

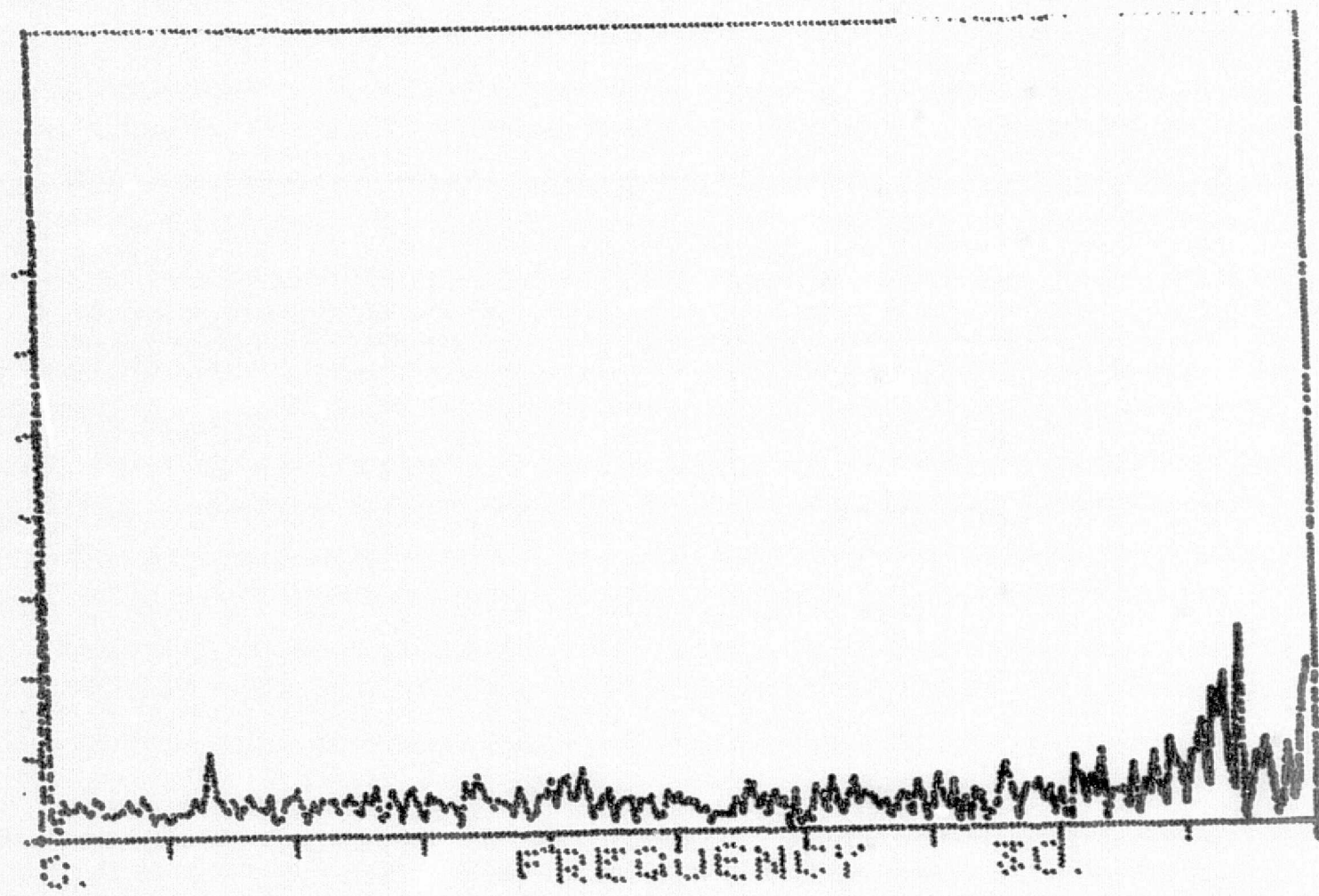
5  
MAGN



COMPLEX

SIZE = 356



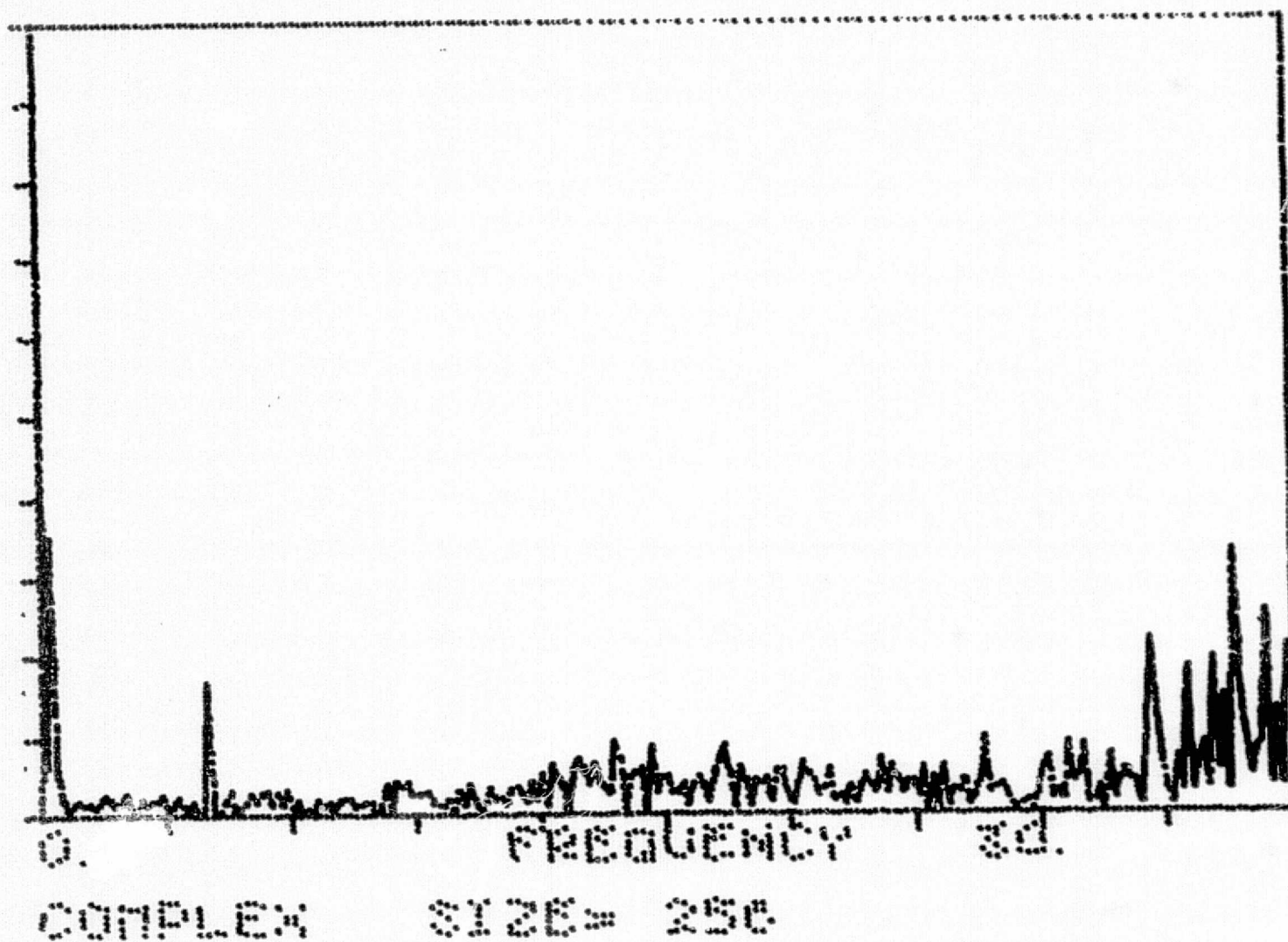


COMPLEX SIZE= 256

5

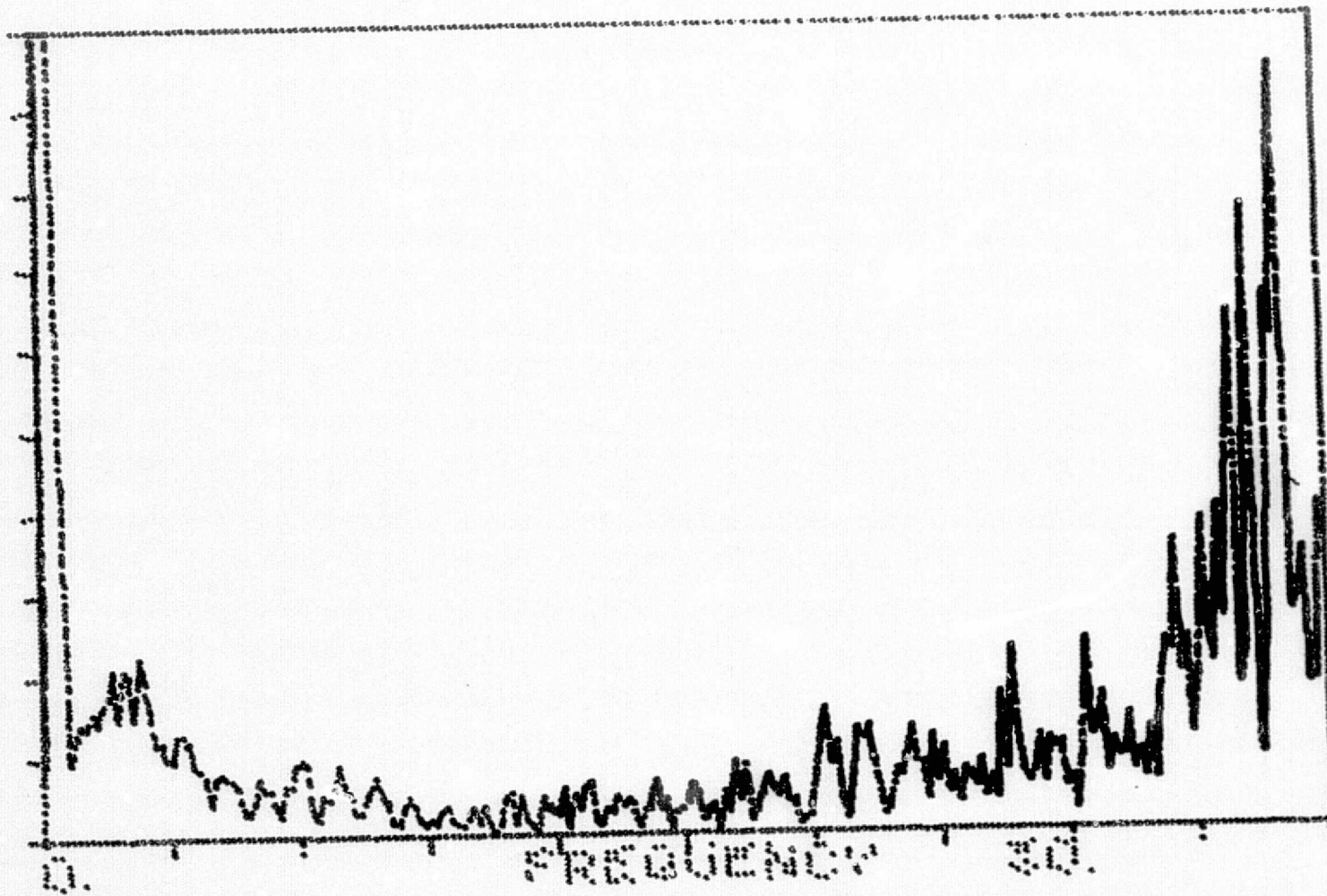
HAON

a.



40



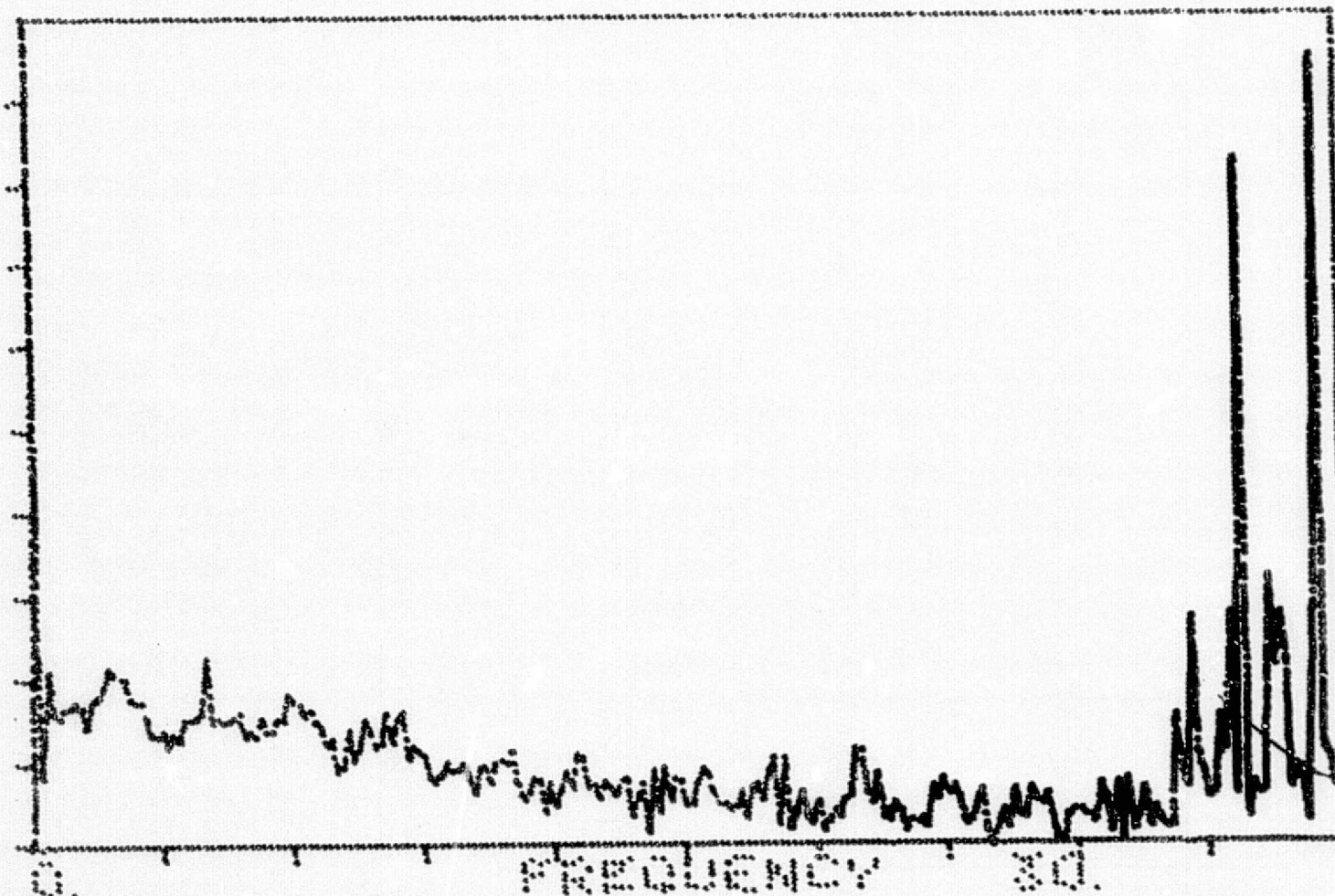


COMPLEX SIZE= 256

5

11404

0.



COMPLEX

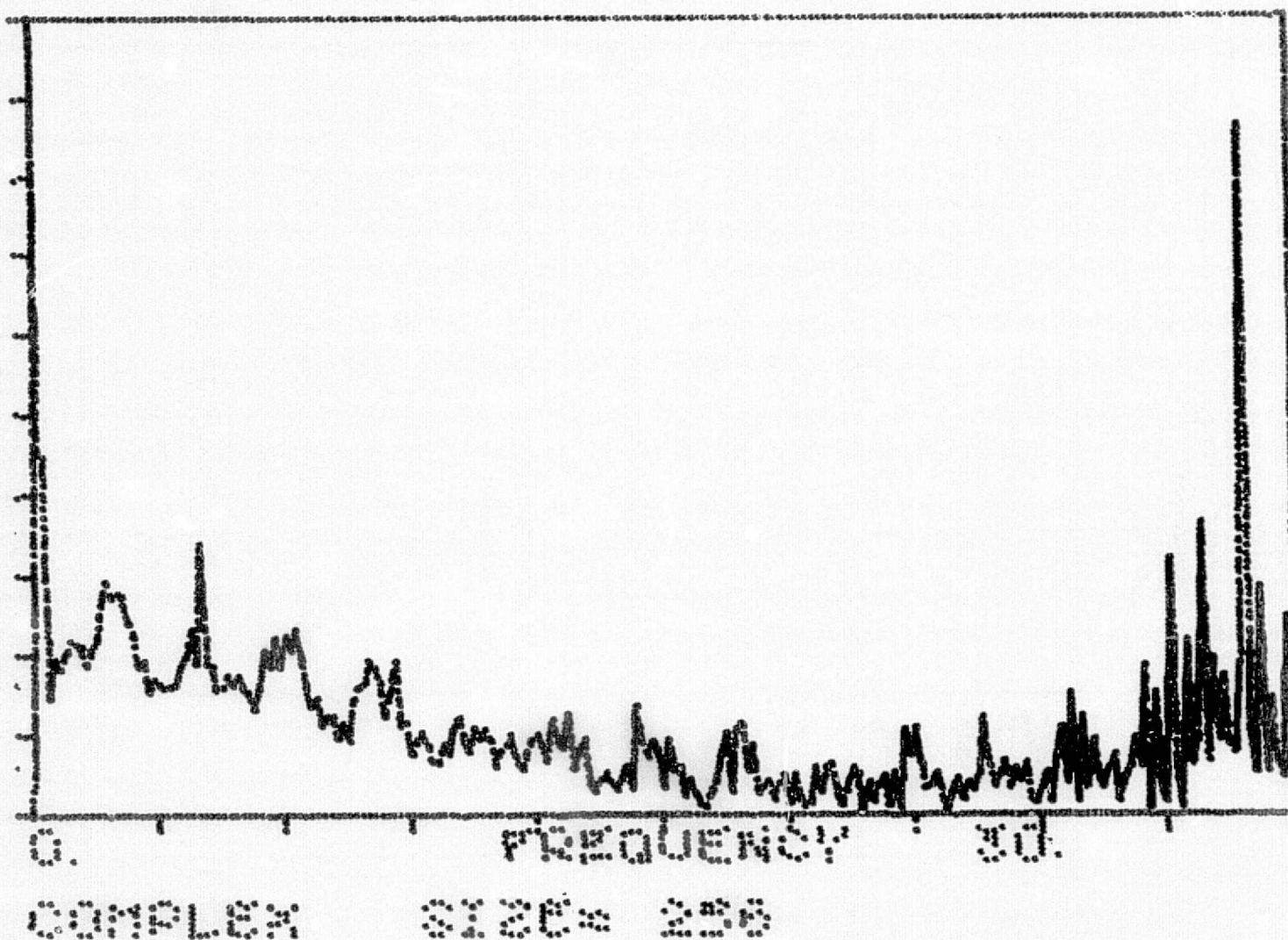
SIZE= 256



8

NRGN

Q.

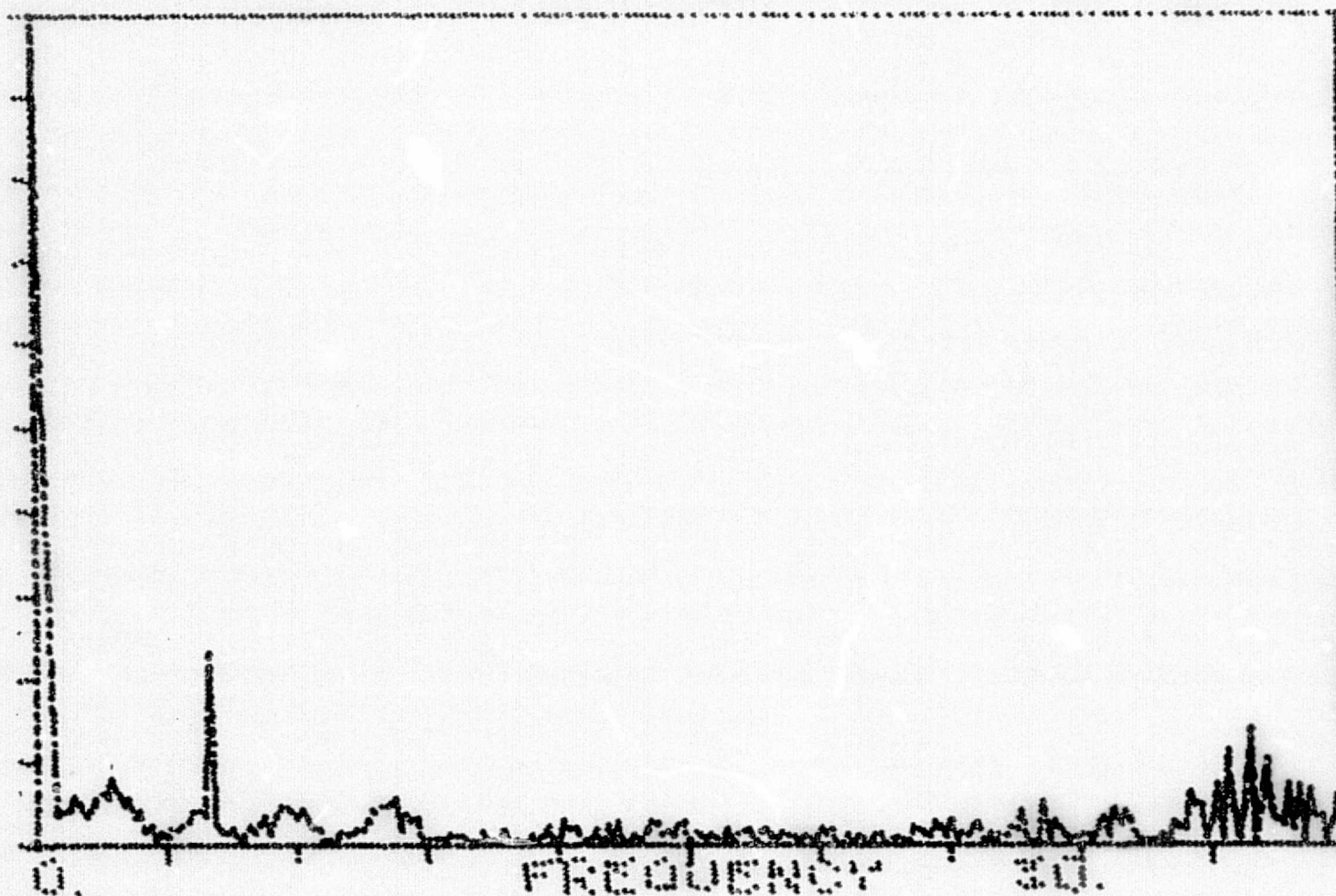


DL9/FL1

. 5

MAGN

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COMPLEX

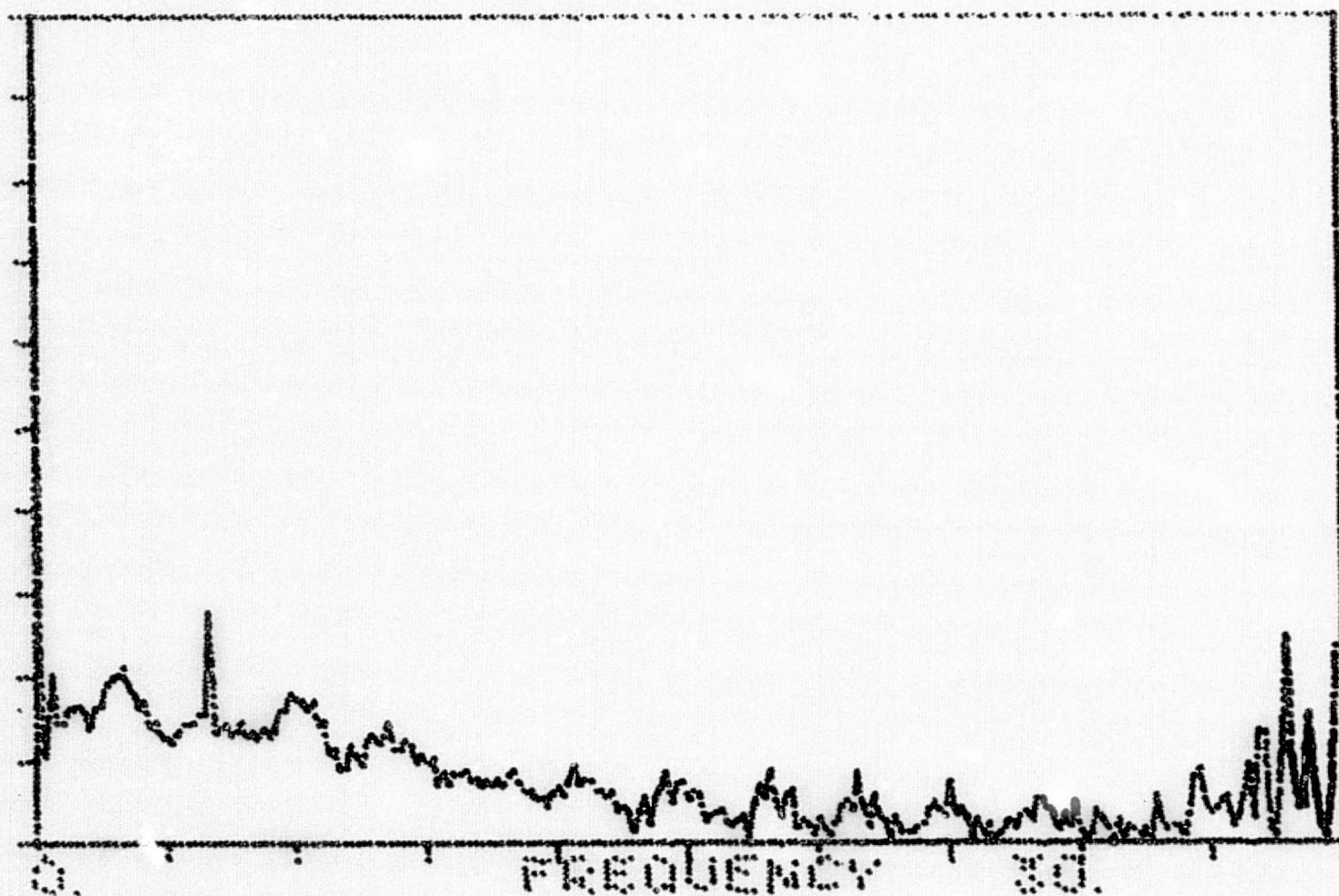
SIZE= 256



5

MAGN

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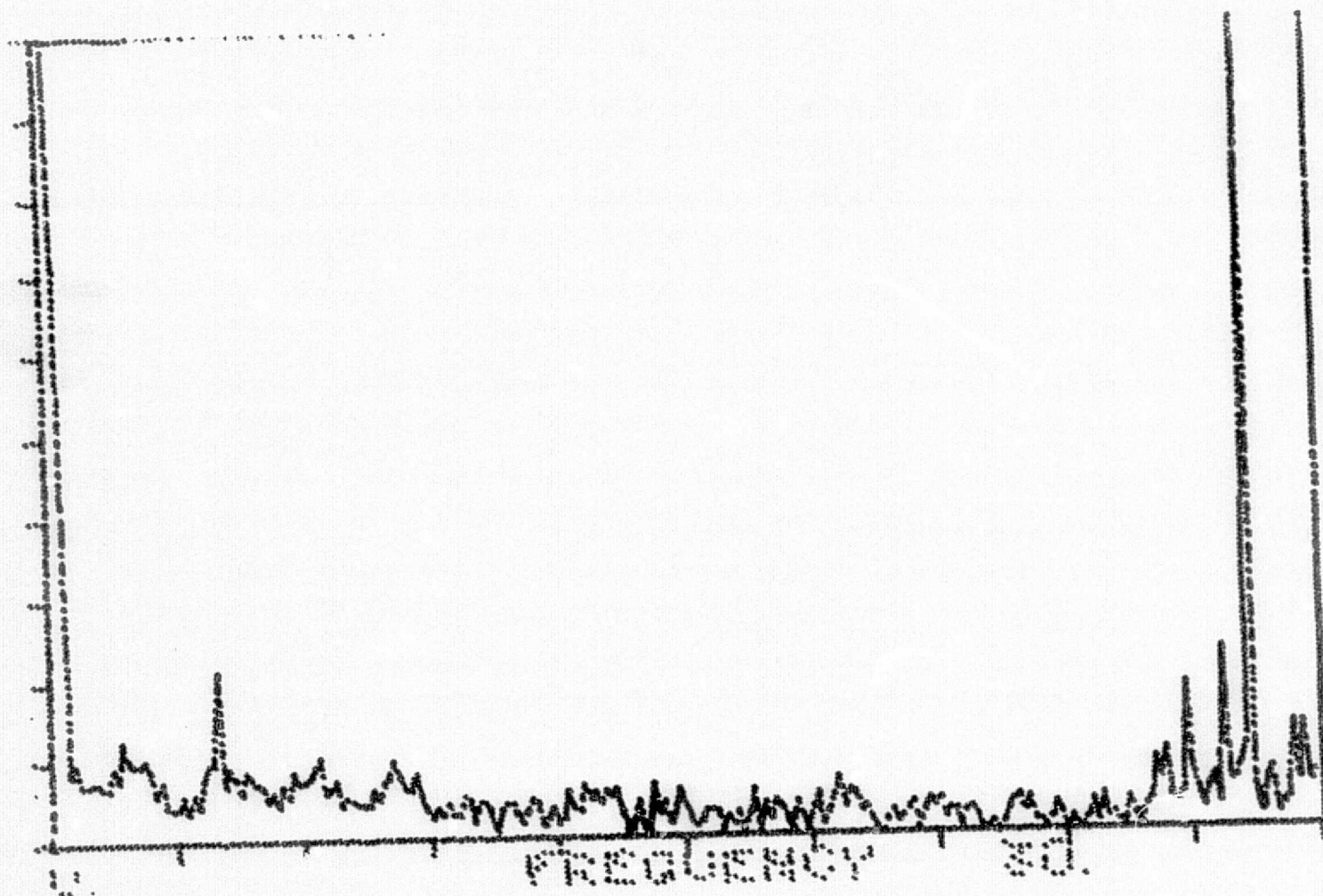
COMPLEX

SIZE= 256

5

1964

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COMPLEX

SIZE= 256

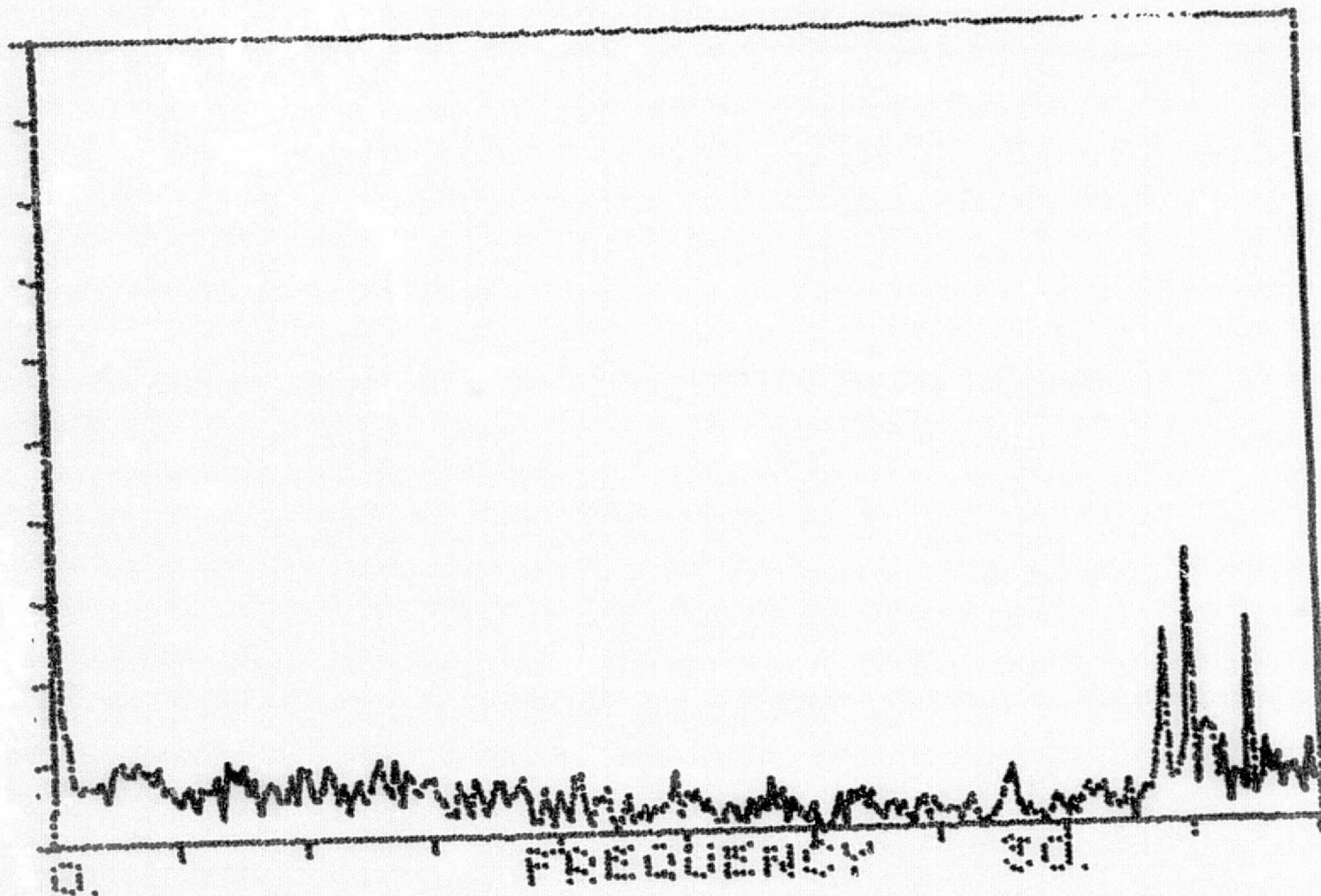
DL12/FL1



5

1904

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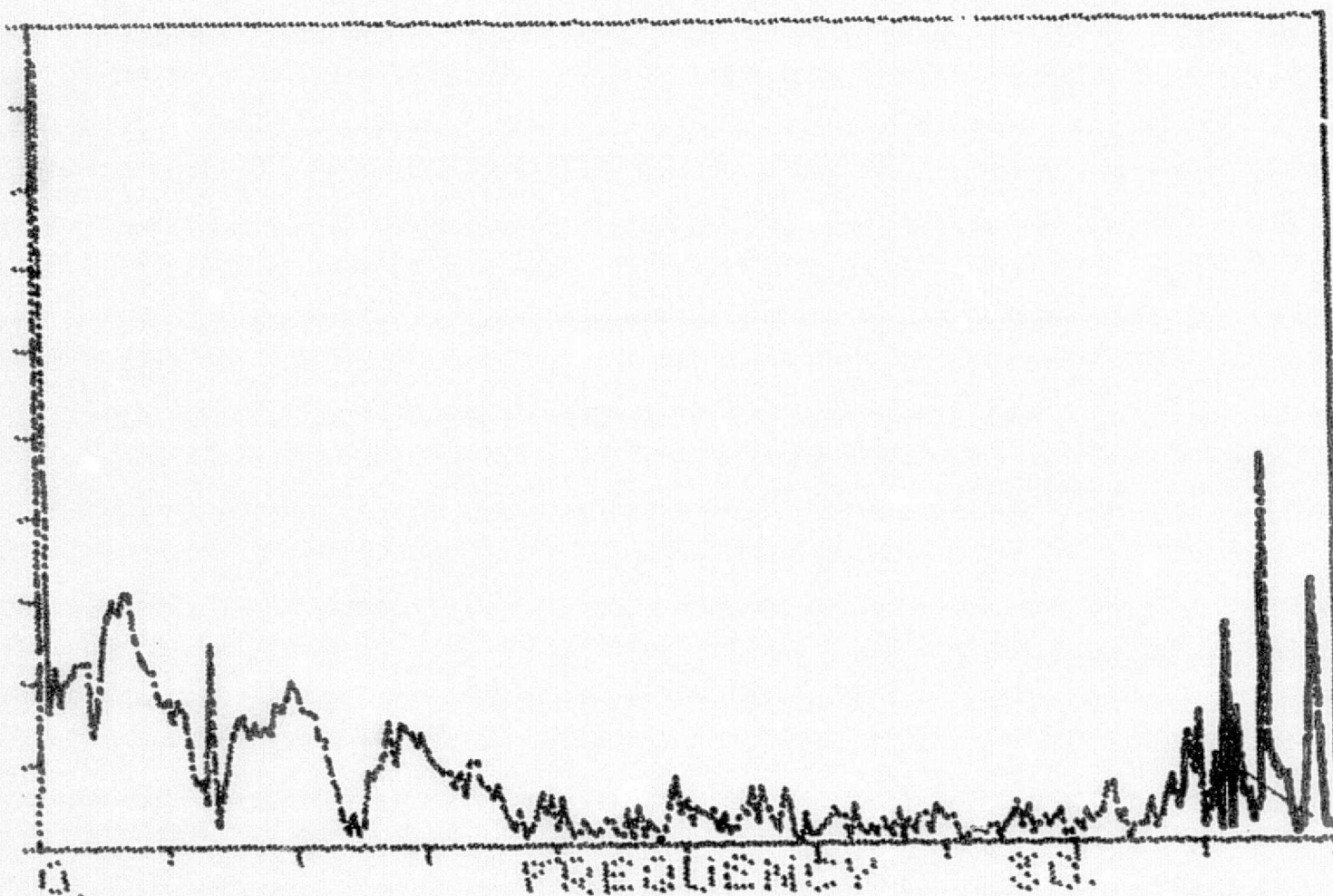


CONFLX

SIZE= 256

9  
npon

0.



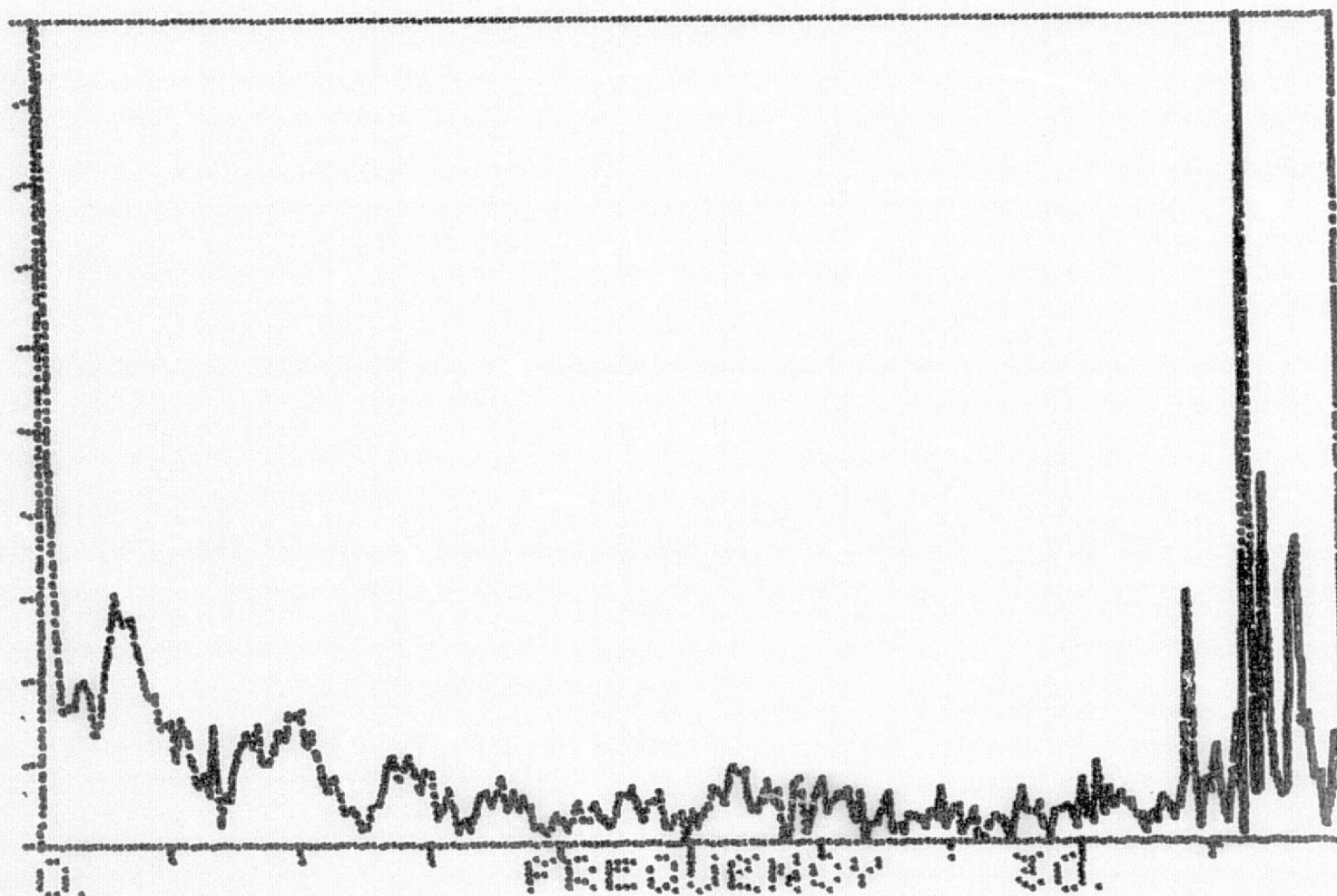
COMPLEX

SIZE= 256



3  
HAGN

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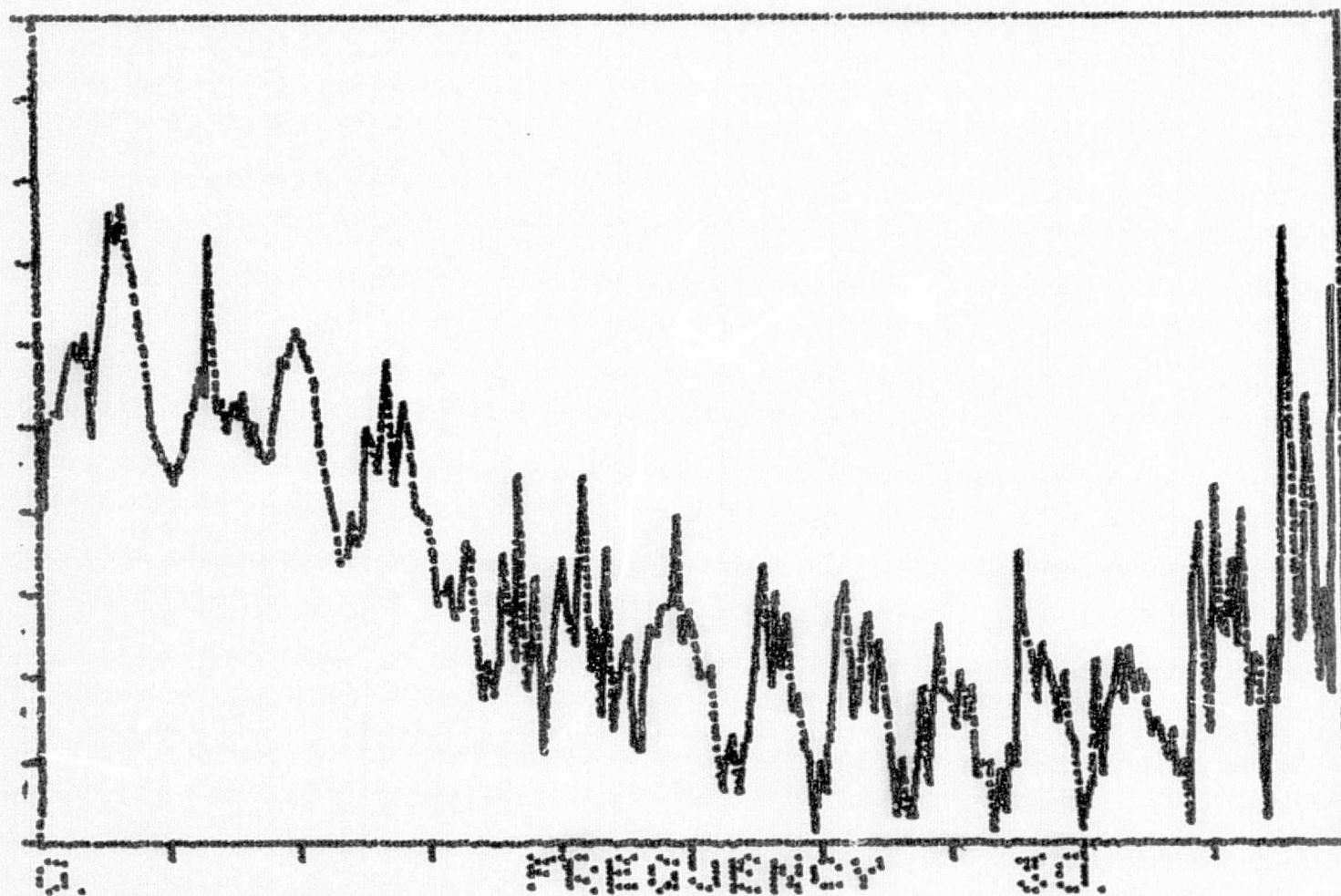
COMPLEX

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5

NRGB

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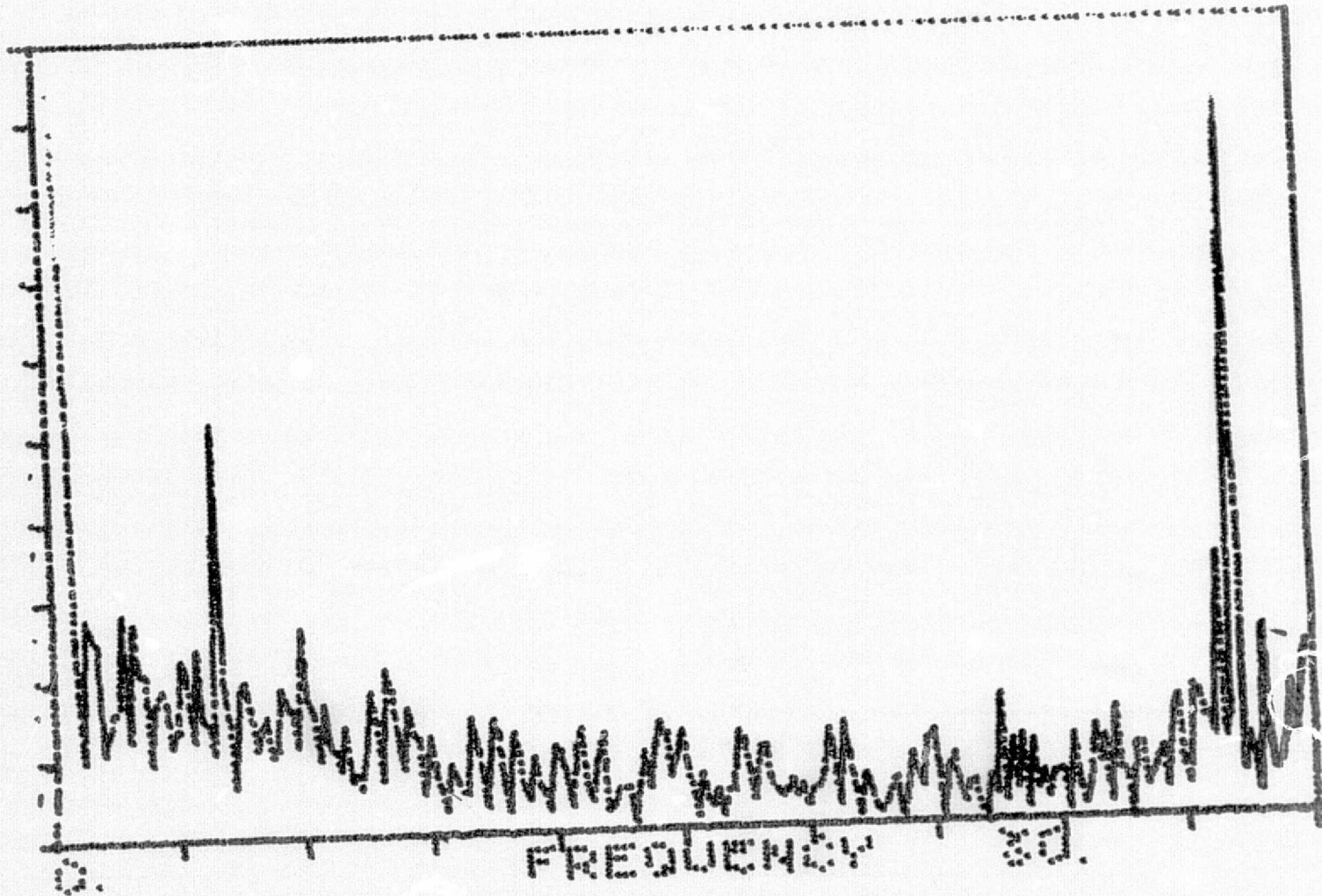
COMPLEX

SIZE= 256



i.

high



COMPLEX

SIZE 256

DL17/FL1

VOLUME IIRUN 9 TEST DATA

Y-AXIS, 7070 POUND/ACTUATOR TEST LEVEL,  
ACTUATORS 180° OUT OF PHASE

1 HEADING: TRAIN TRACK TRANSFER 7070 LB TEST 3/18/75

SWEEP PARAMETERS:

2 MODE 1=LOG, 0=LIN: 1.  
 3 TYPE 1=UNI-DIRECTIONAL, 0=BI-DIRECTIONAL: 1.  
 4 START, END FREQ, HZ: .5 50.  
 FREQ RANGE -- OCTAVES, DECADES: 6.644 2.  
 5 SPECIFICATION 1=RATE, 0=DURATION: 1.  
 6 UNITS 1=OCT/MIN, 0=DEC/MIN: 1.  
 7 RATE, OCT/MIN: 2.  
 SWEEP DURATION -- MIN, SEC: 3. 19.

TEST LENGTH:

8 SPECIFICATION 1=TIME, 0=SWEEP CYCLES: 0.  
 9 CYCLES: 1.  
 TEST TIME -- HRS, MIN, SEC: 0. 3. 19.

START-UP AND SHUT-DOWN:

10 START-UP TIME, SEC: 120.  
 11 SHUT-DOWN TIME, SEC: .5

VIBRATION LIMITS (P-P):

12 DISPLACEMENT, IN: 5000.  
 13 VELOCITY, IN/SEC: 9999.  
 14 ACCELERATION, G: 450.

REFERENCE CONTROL SPECTRUM:

15 TYPE, VALUE, FREQ, ABORT LIMIT: 1. 1867. 1.98 3.  
 16 TYPE, VALUE, FREQ, ABORT LIMIT: 2. 60. 50. 3.  
 17 TEST LEVEL (DB BELOW REF): 3.

ACCELERATION SIGNALS:

18 NR OF SIGNALS: 2.  
 CHANNEL NRS: 1. 2.  
 19 1=PEAK, 0=RMS: 0.  
 20 SENSITIVITY, MV/G: 22.22  
 21 STRATEGY 1=MAX, 0=AVG: 1.

LIMIT SIGNALS:

22 NR OF SIGNALS: 0.

ABORT LINES:

23 NR OF LINES: 0.

ALARM LINES:

24 NR OF LINES: 0.  
 25 1=DUAL-CHANNEL A/D, 0=ACE: 1.  
 26 COMPRESSION SPEED 2=HIGH, 1=NORMAL, 0=LOW: 1.



## POST-TEST DOCUMENTATION

TRAIN TRACK TRANSFER 7070 LB TEST 3/18/75

COMPLETION STATUS: ABORTED DURING SWEEP 1 AT 23.75 HZ.  
CONTROL LIMITS EXCEEDED.

TEST DURATION -- HRS, MIN, SEC: 0 2 47

MAX ABS CONTROL ERROR: 3.15 DB AT 23.73 HZ.

AVG ABS CONTROL ERROR: .3004 DB.

CONTROL  
CHANNEL FREQ RANGE (HZ)

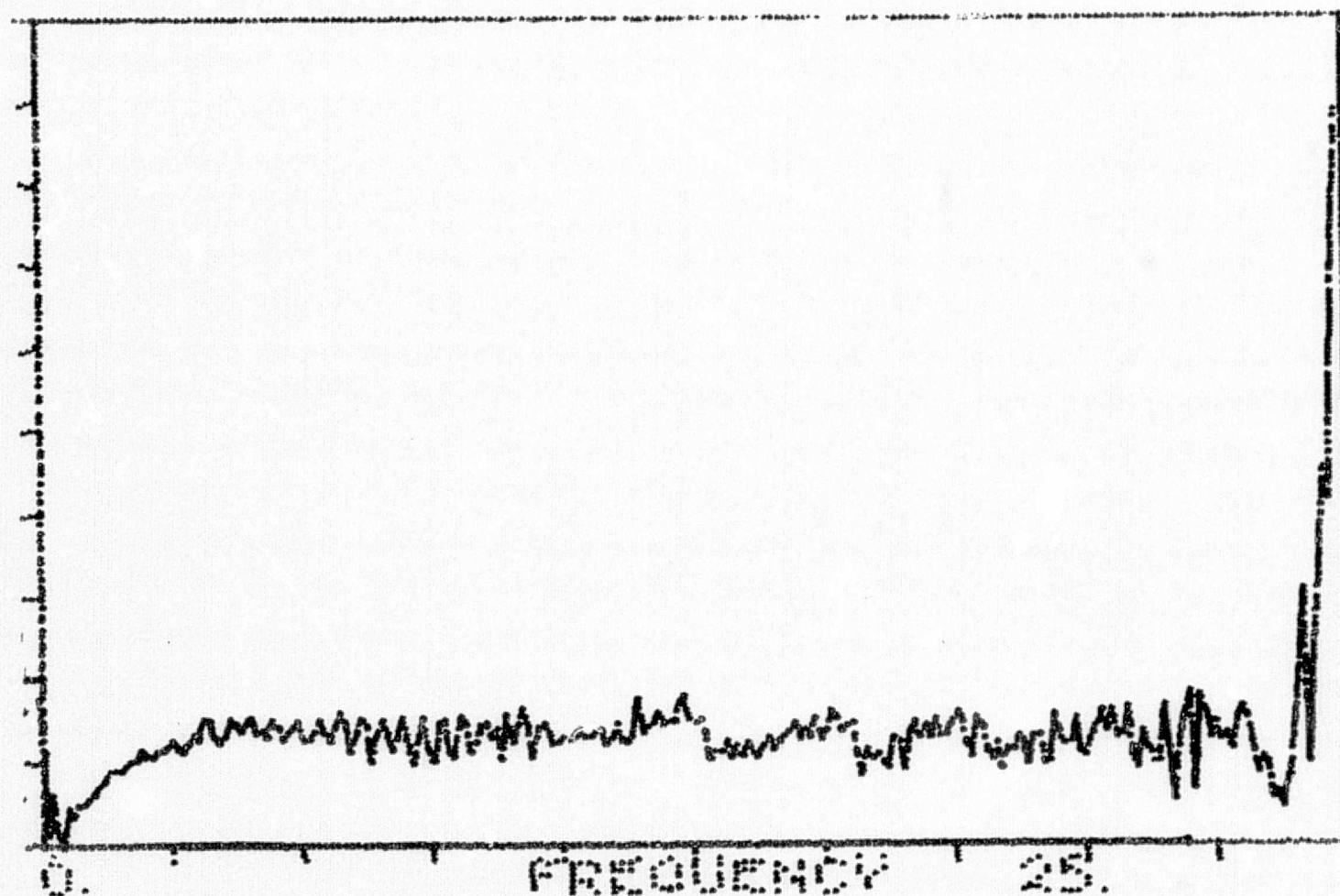
SWEEP 1

|   |       |    |       |
|---|-------|----|-------|
| 2 | .5    | -- | .5    |
| 1 | .5    | -- | 1.89  |
| 2 | 1.89  | -- | 3.153 |
| 1 | 3.153 | -- | 12.85 |
| 2 | 12.85 | -- | 22.6  |
| 1 | 22.6  | -- | 22.96 |
| 2 | 22.96 | -- | 22.98 |
| 1 | 22.98 | -- | 23.75 |

5.

MAGN

0.



COMPLEX

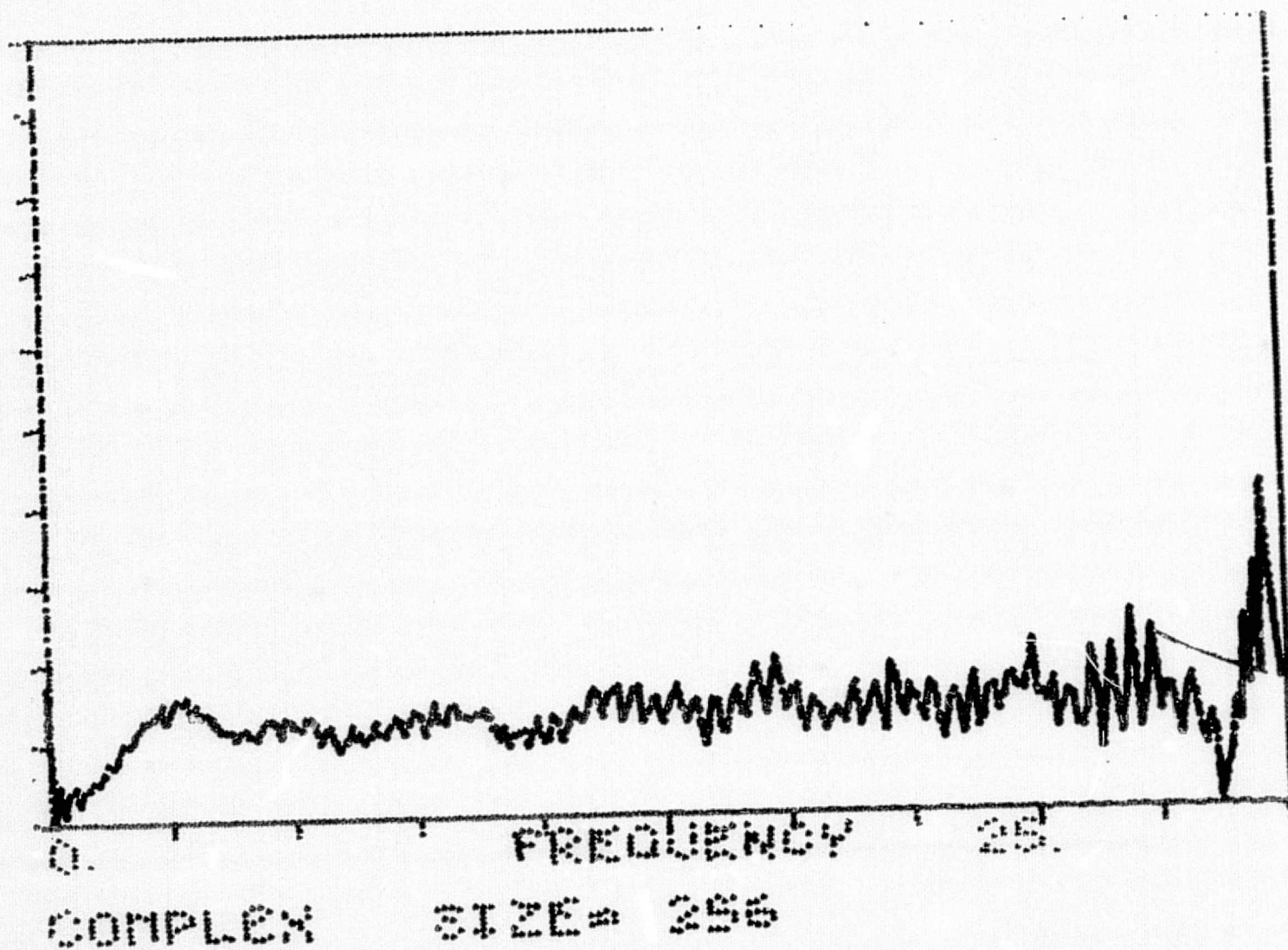
SIZE= 256

FL1/DRIVE

5.

NASH

0.



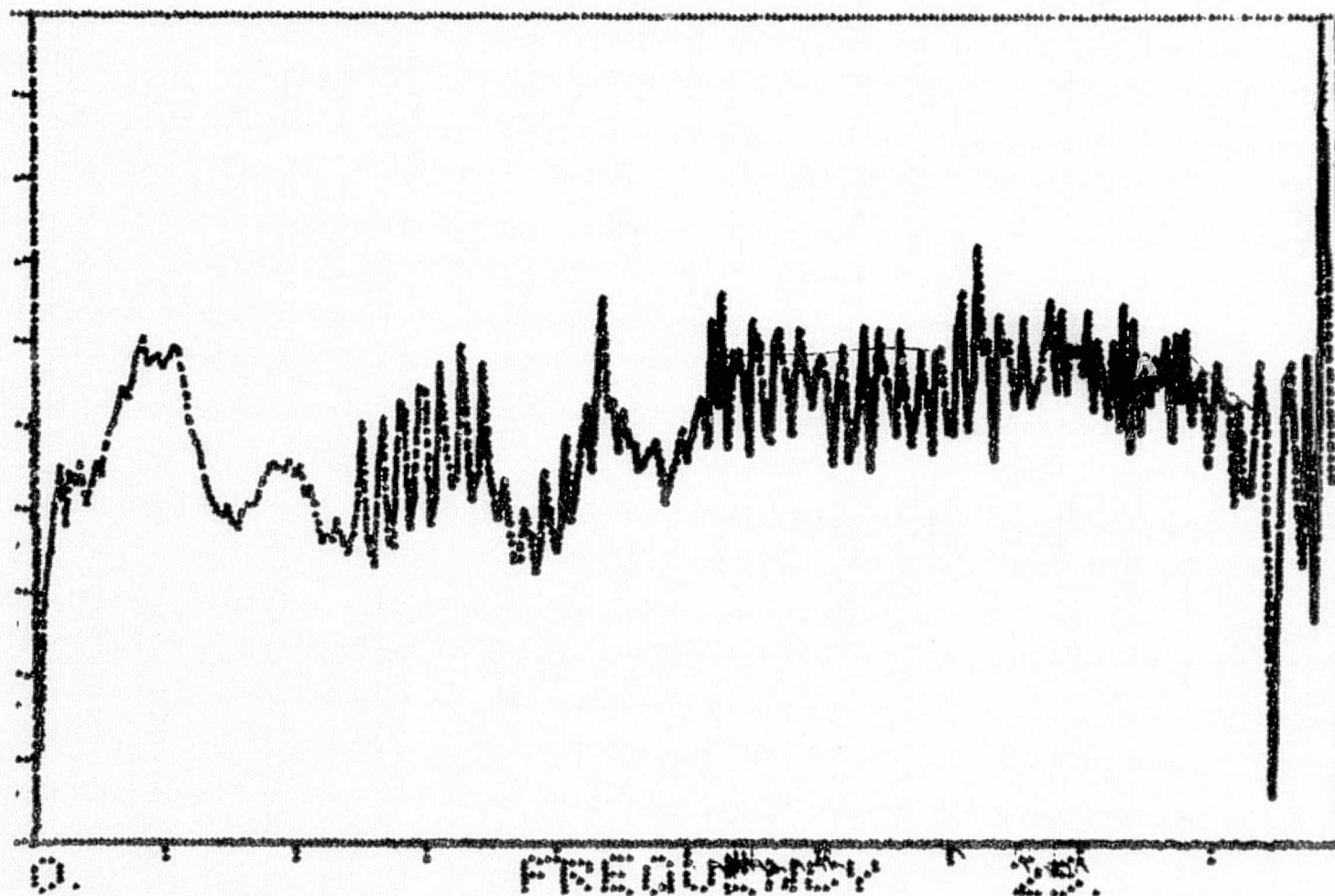
FL2/DRIVE



2.

MAGK

0.



COMPLEX

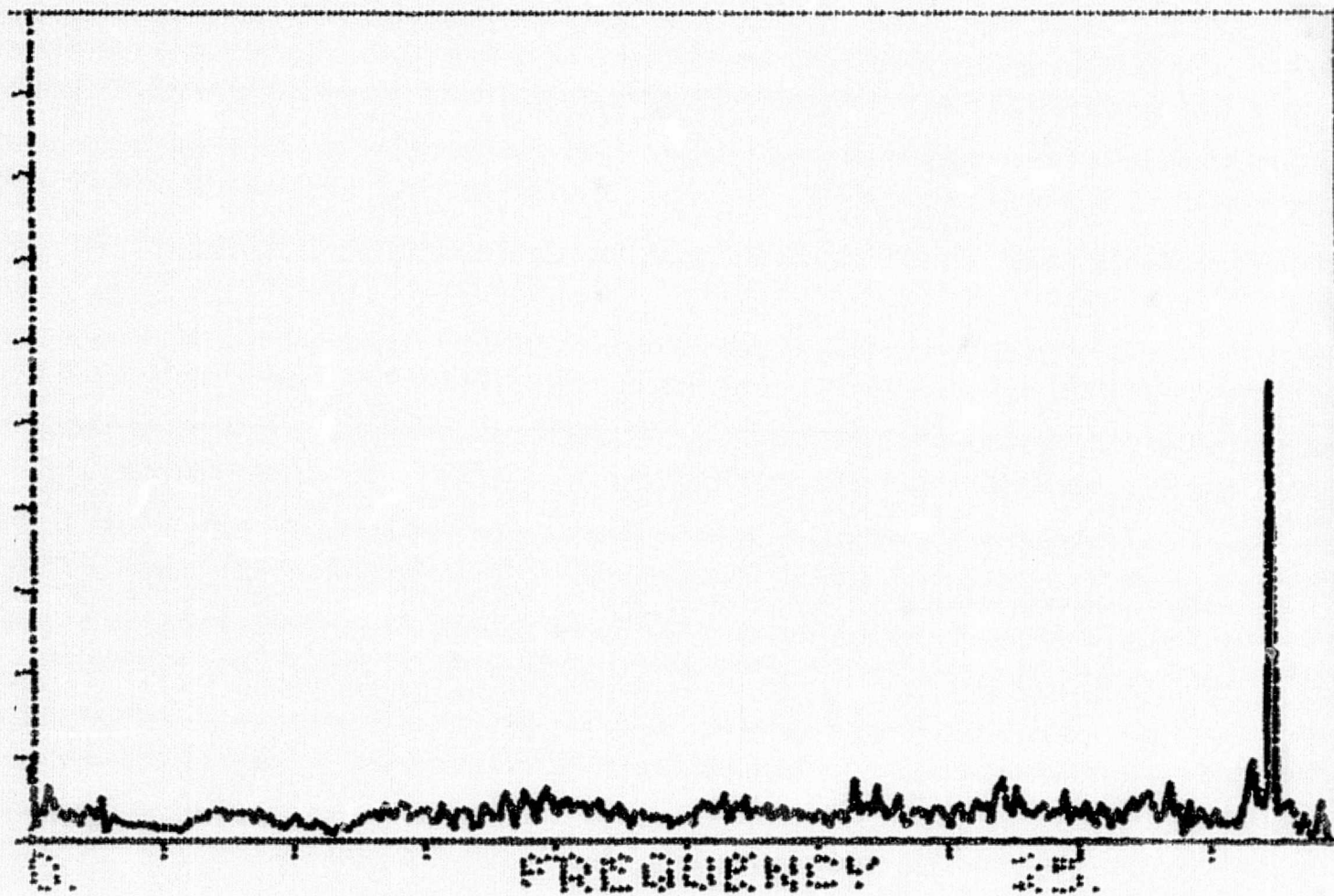
SIZE= 256

FL2/FL1

10.

11004

0.



COMPLEX

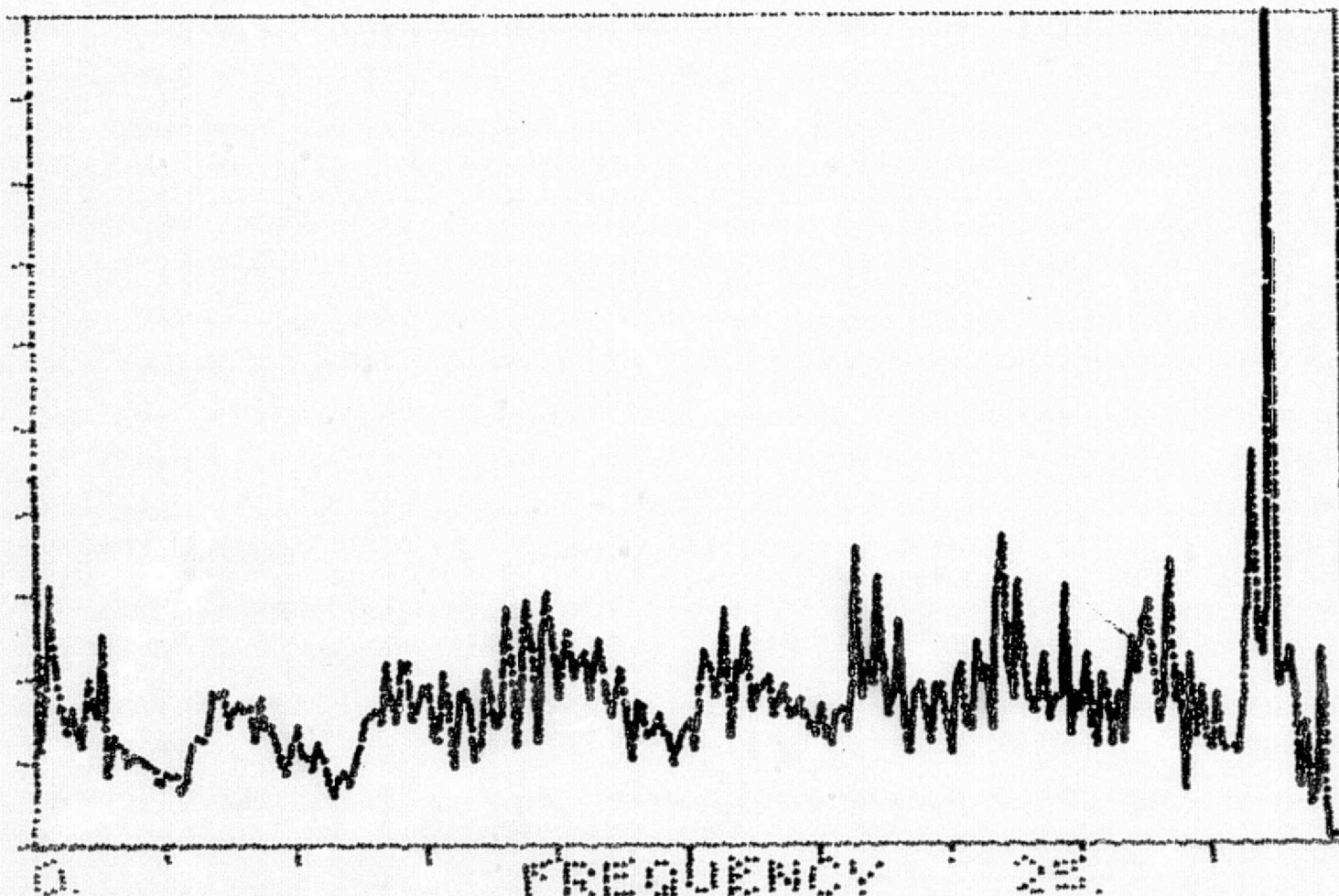
SIZE= 256

FV2/FL1

2.

MAGN

0.



COMPLEX

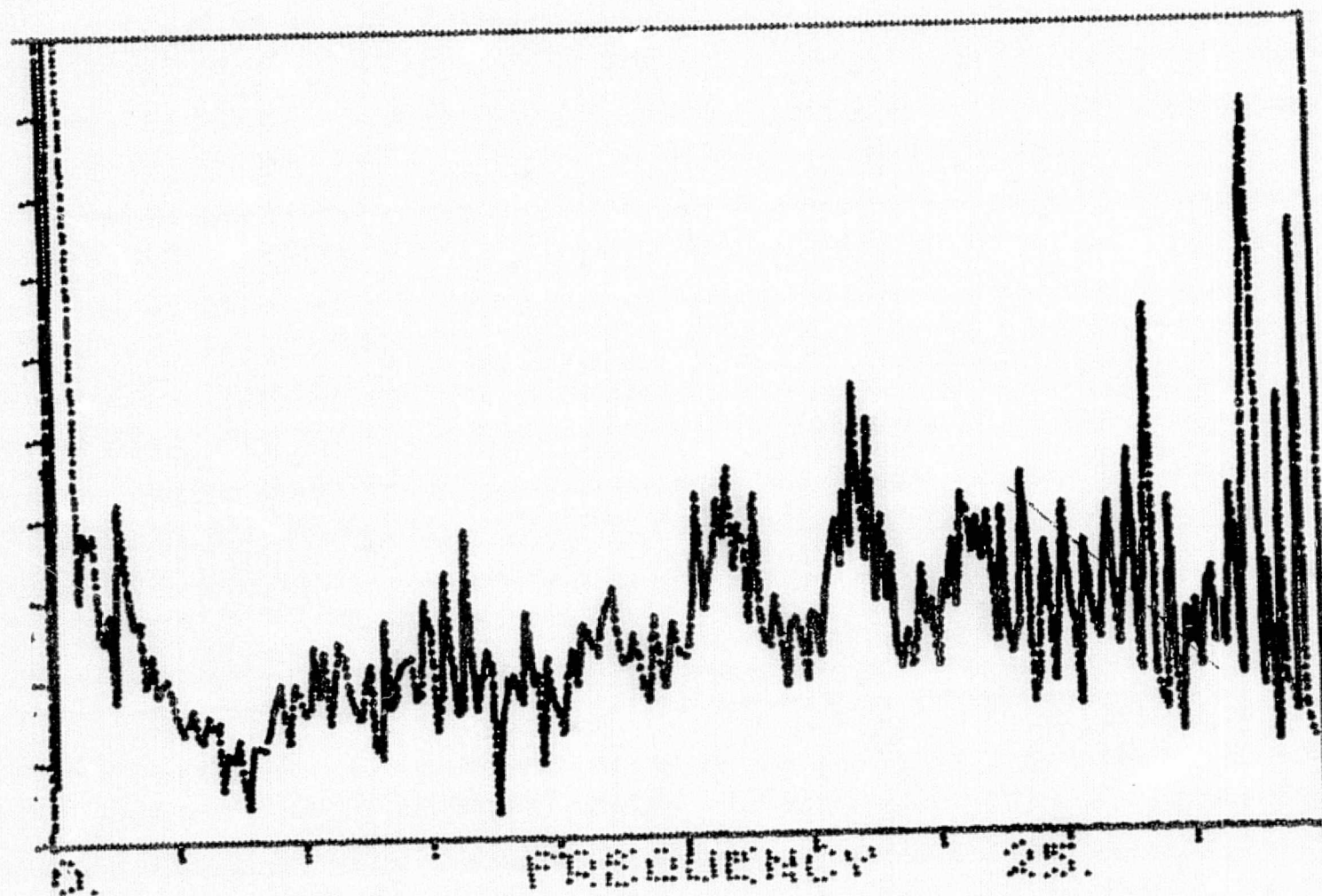
SIZE= 355



2.

MAGN

0.



COMPLEX

SIZE = 256

Q.

FROM

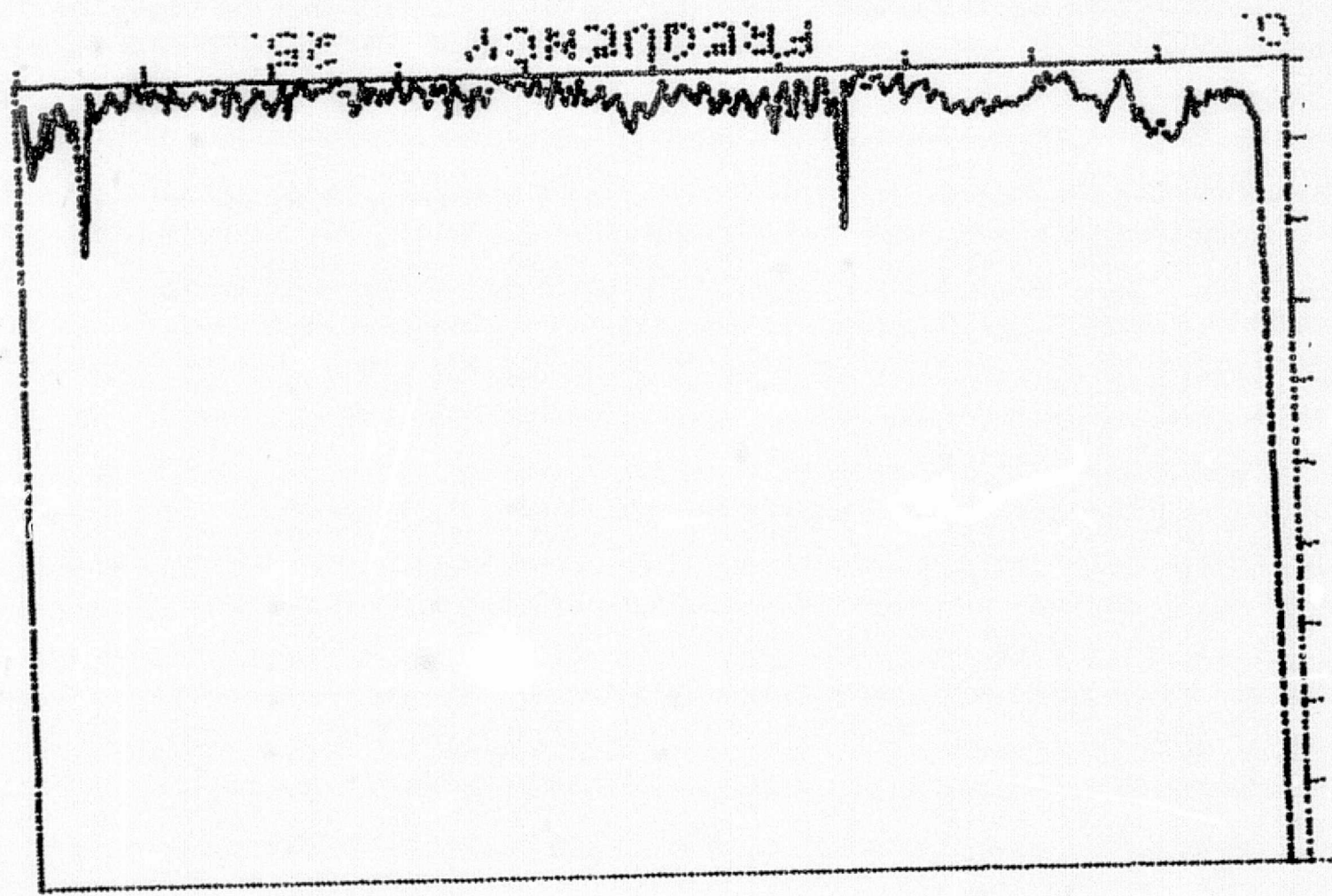
5.

DVI/FL1

COMPLEX SIZE = 256

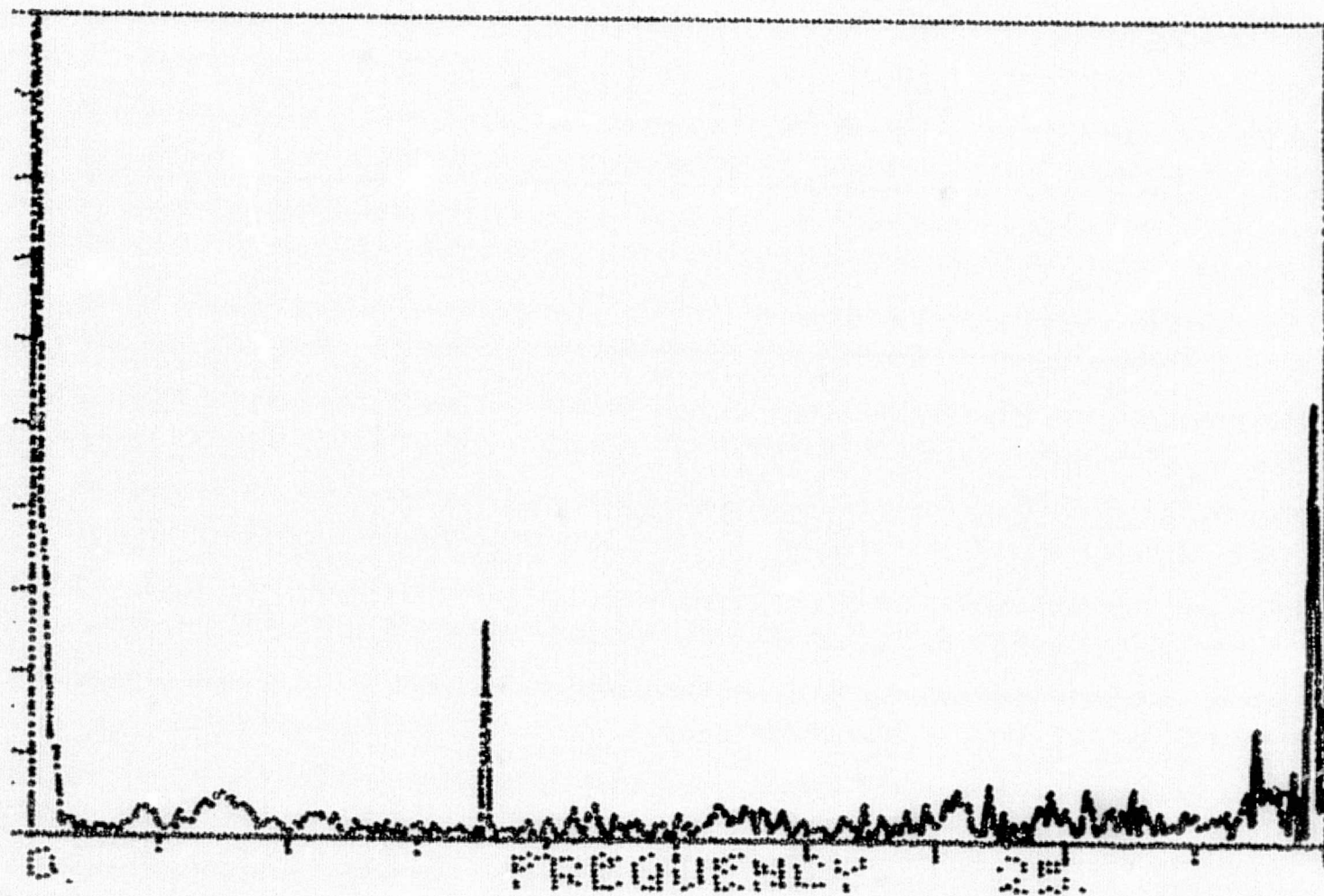
FREQUENCY

35.



. 5

mag



COMPLEX

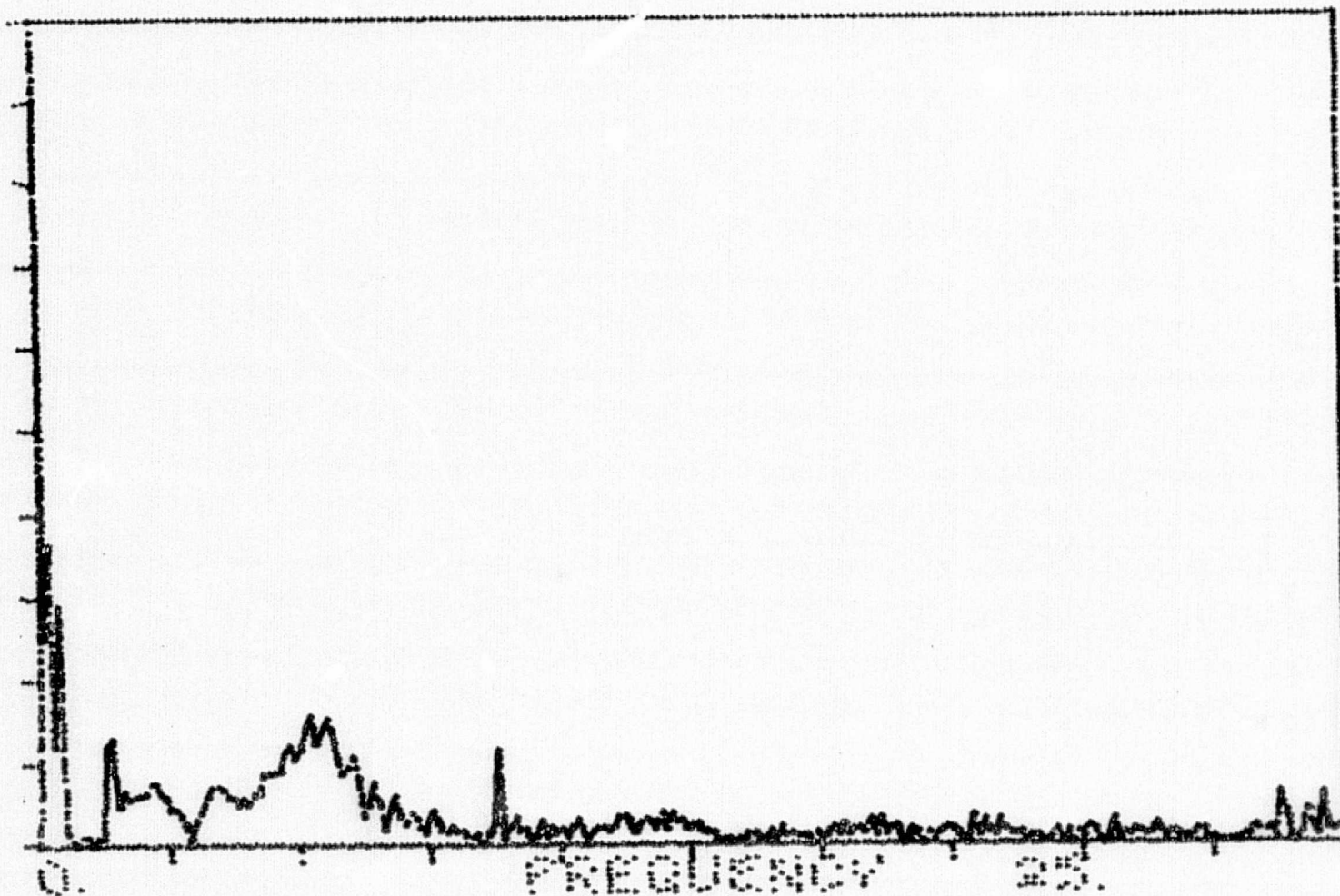
SIZE= 256



B

NRGM

0.

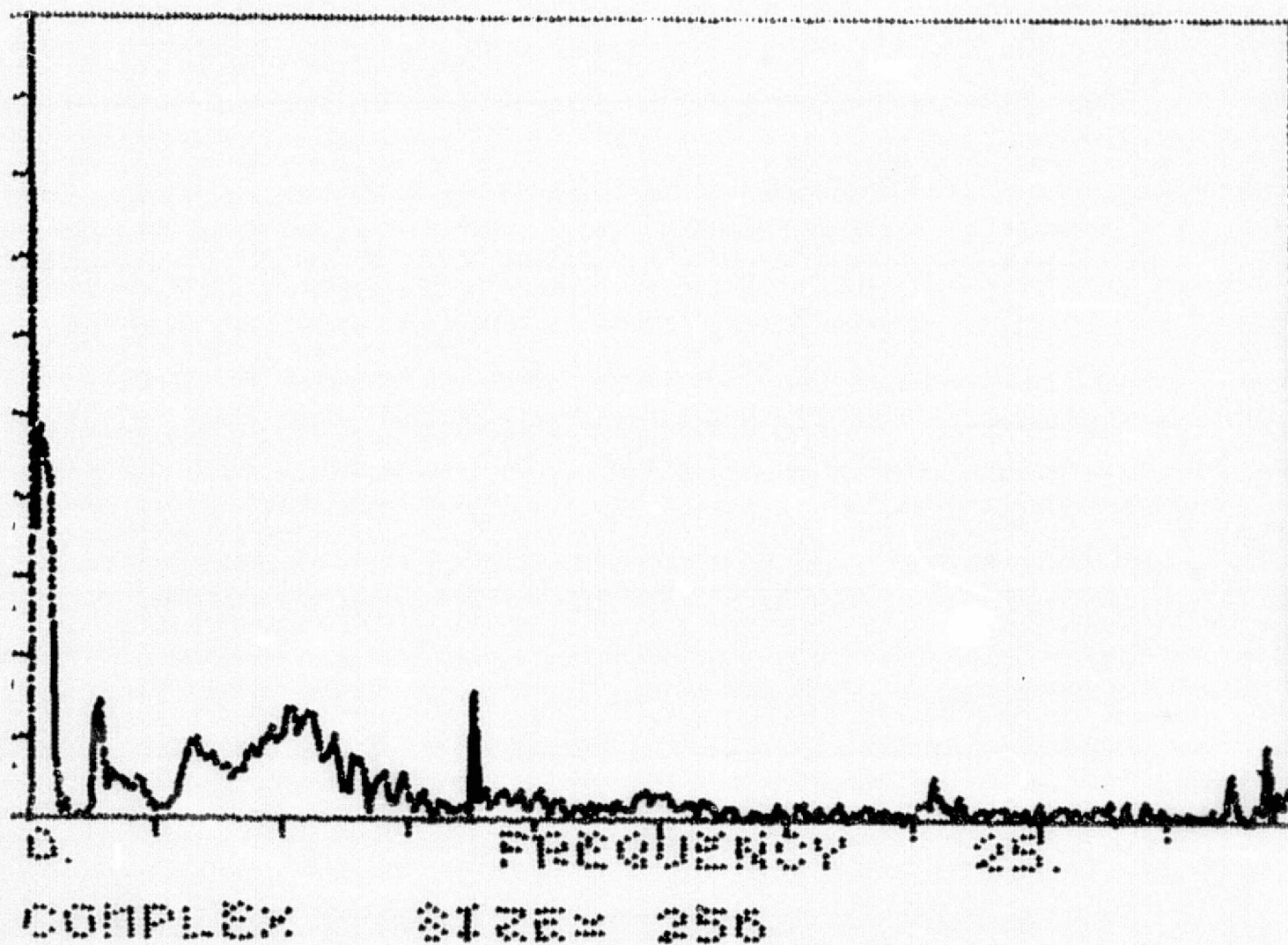


COMPLEX

SIZE= 256

5  
MAGN

0.



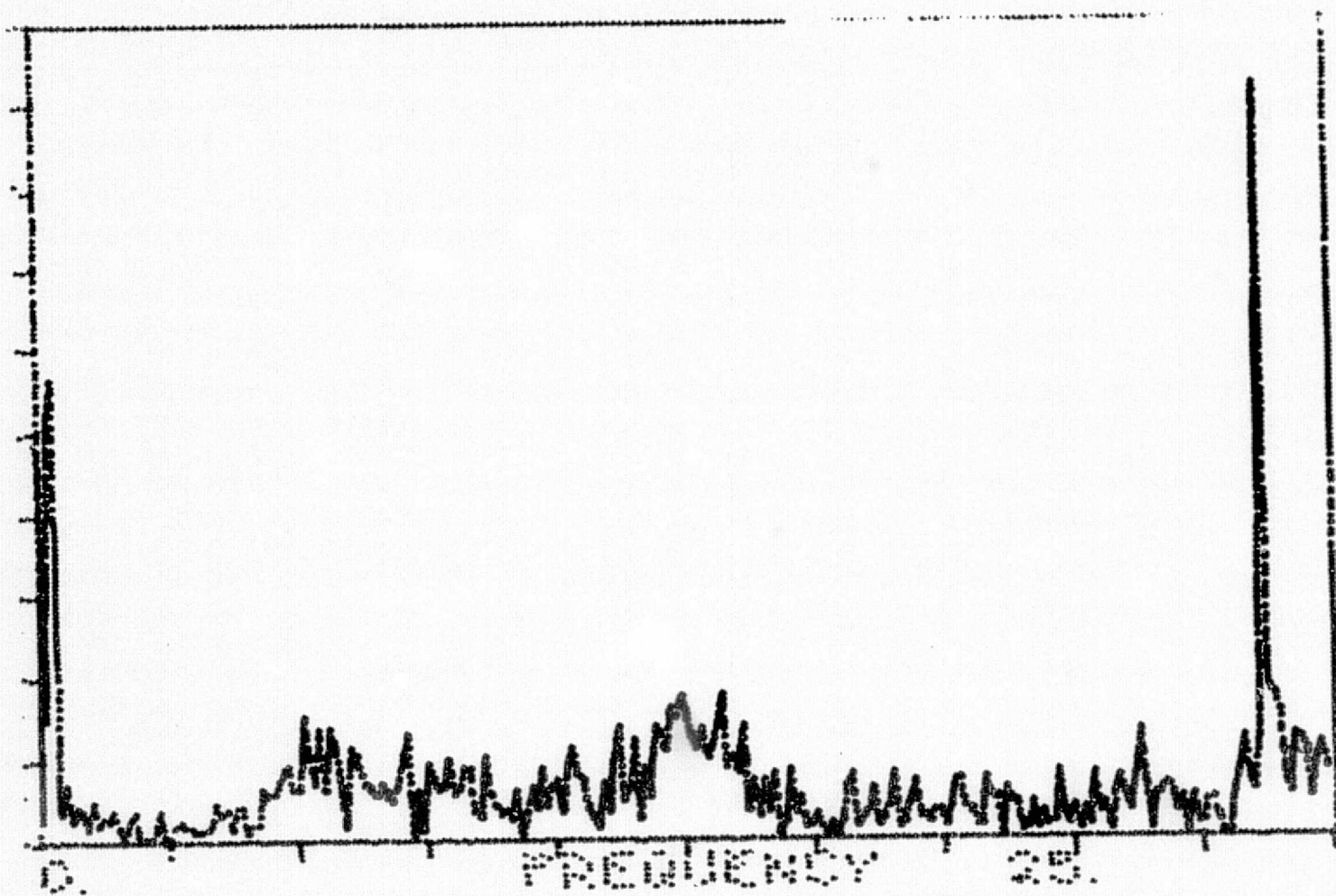
DV4/FL1



Q.

MAEN

Q.



COMPLEX

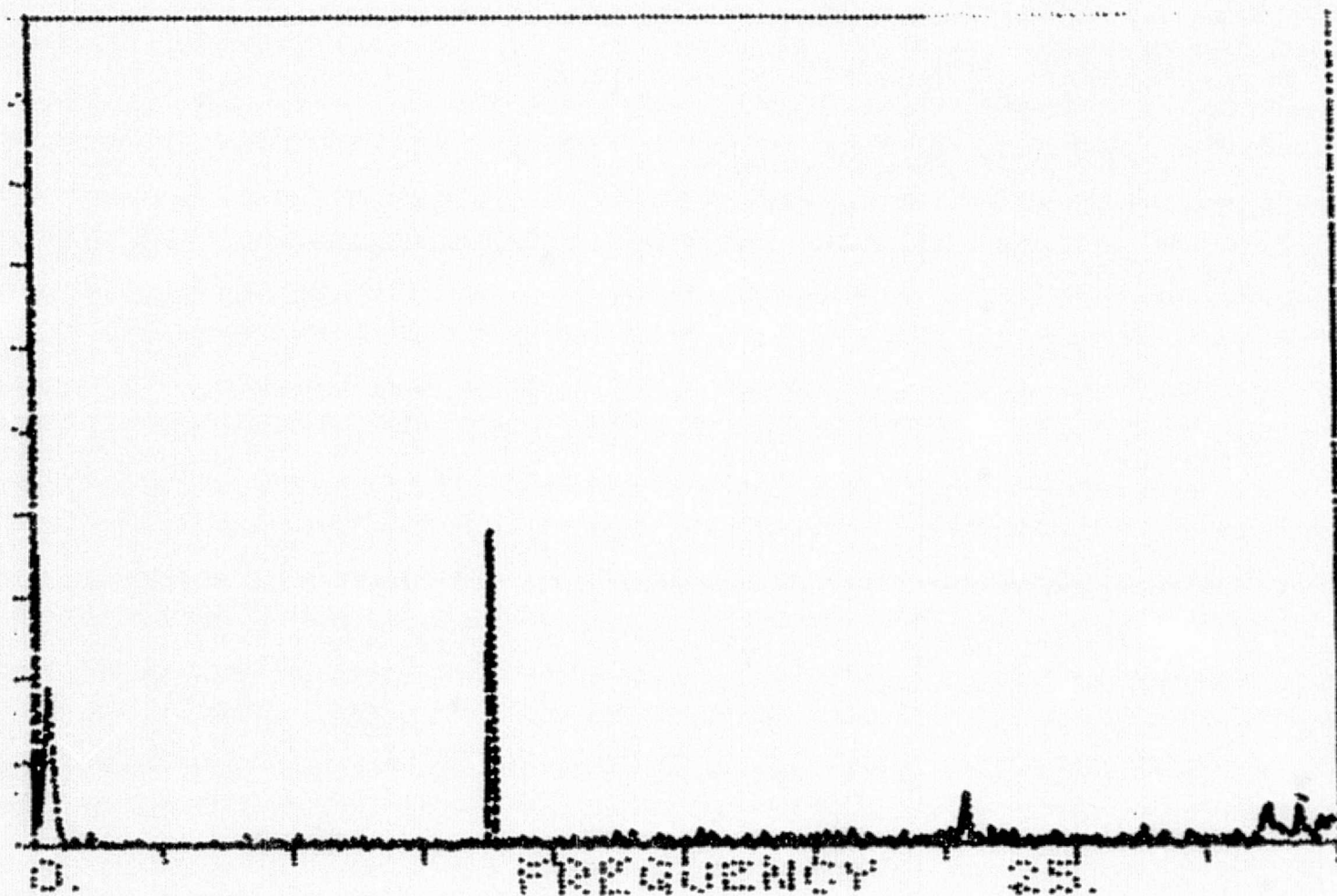
SIZE= 355

AV1/FL1

. 5

MAGN

0.



COMPLEN

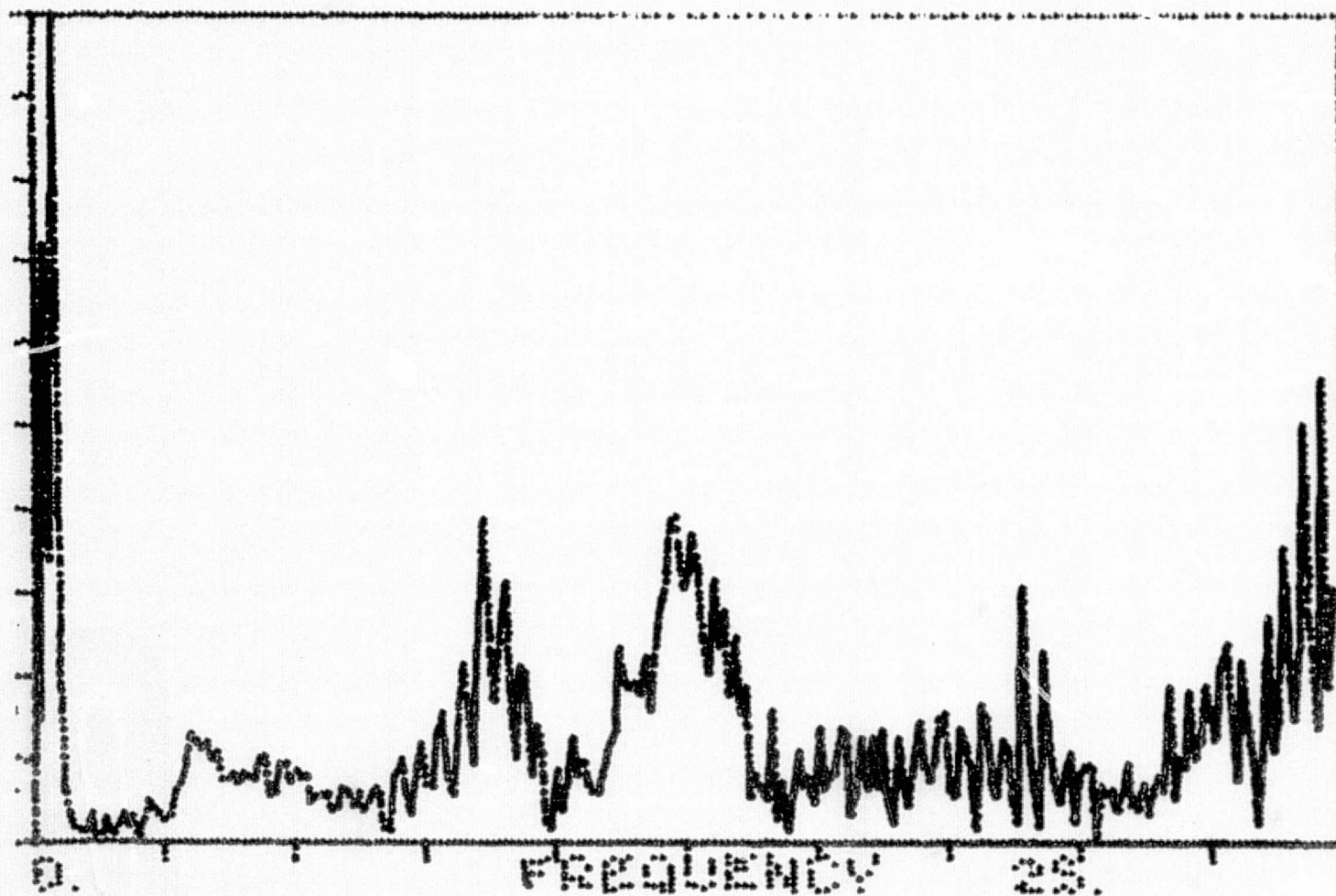
SIZE= 256

AV2/FL1

1.

MACN

0.



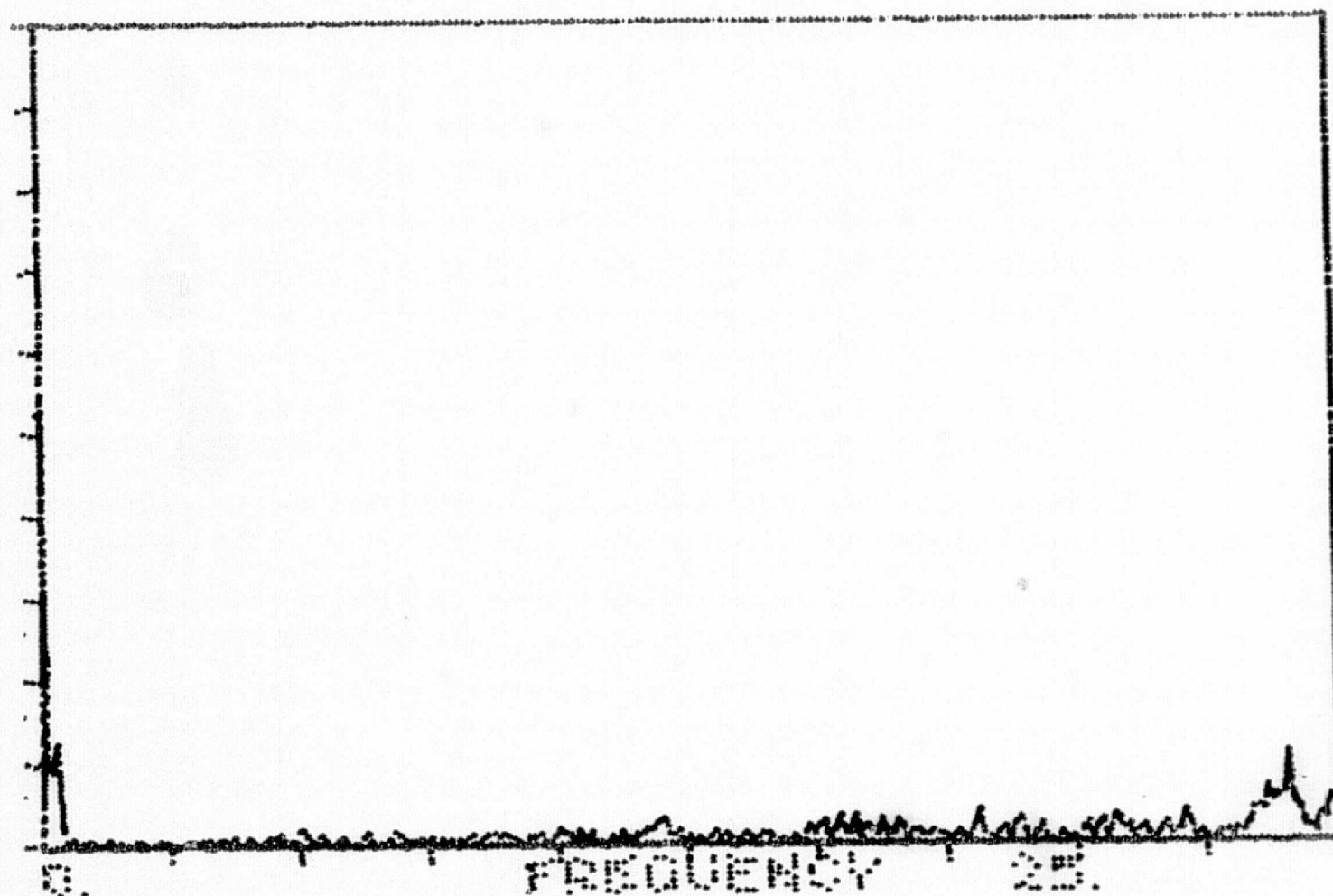
COMPLEX

SIZE= 256



3  
HACK

0.



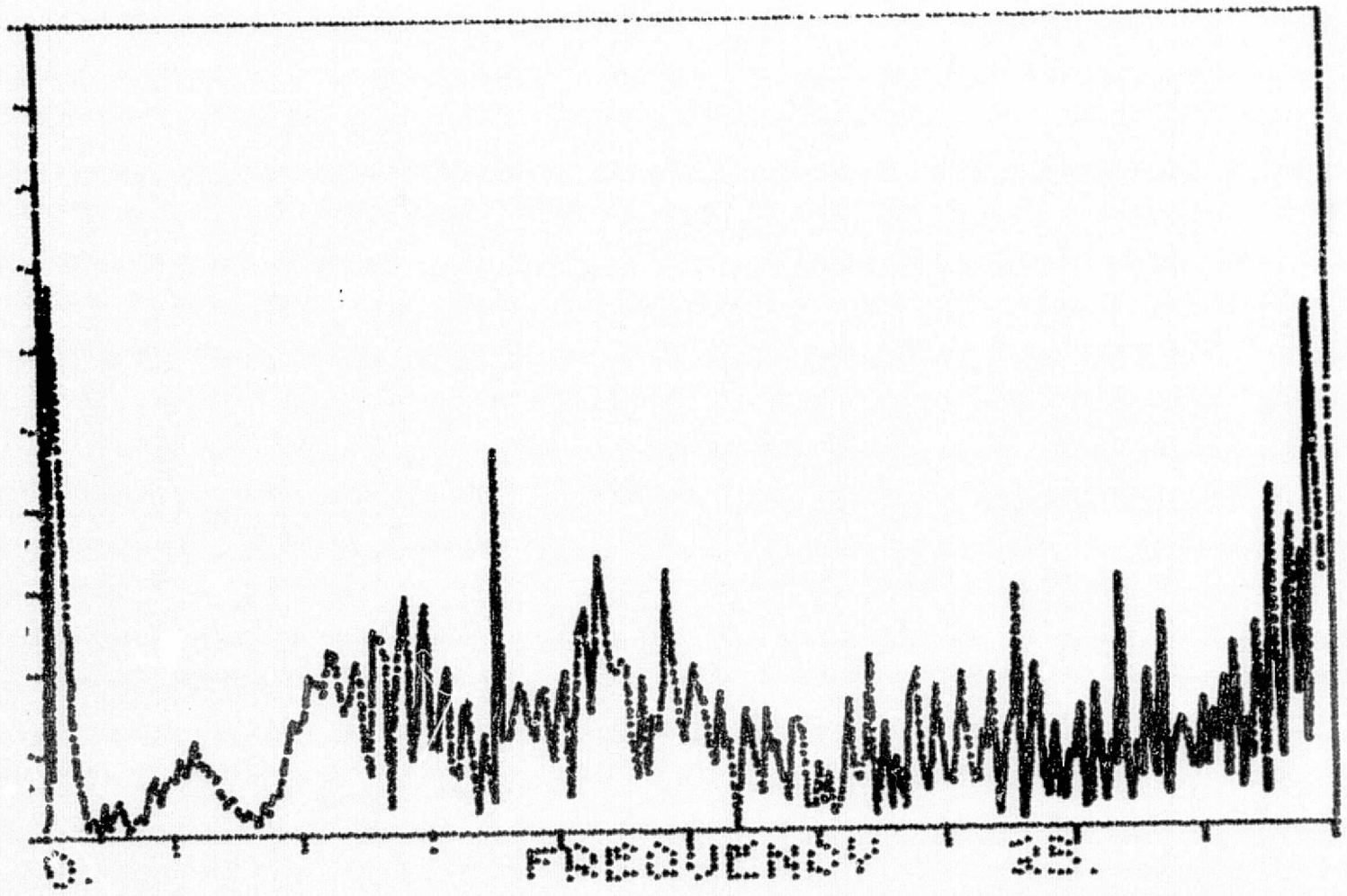
COMPLEX SIZE= 256

AV4/FL1

5

MAGN

0.



COMPLEX

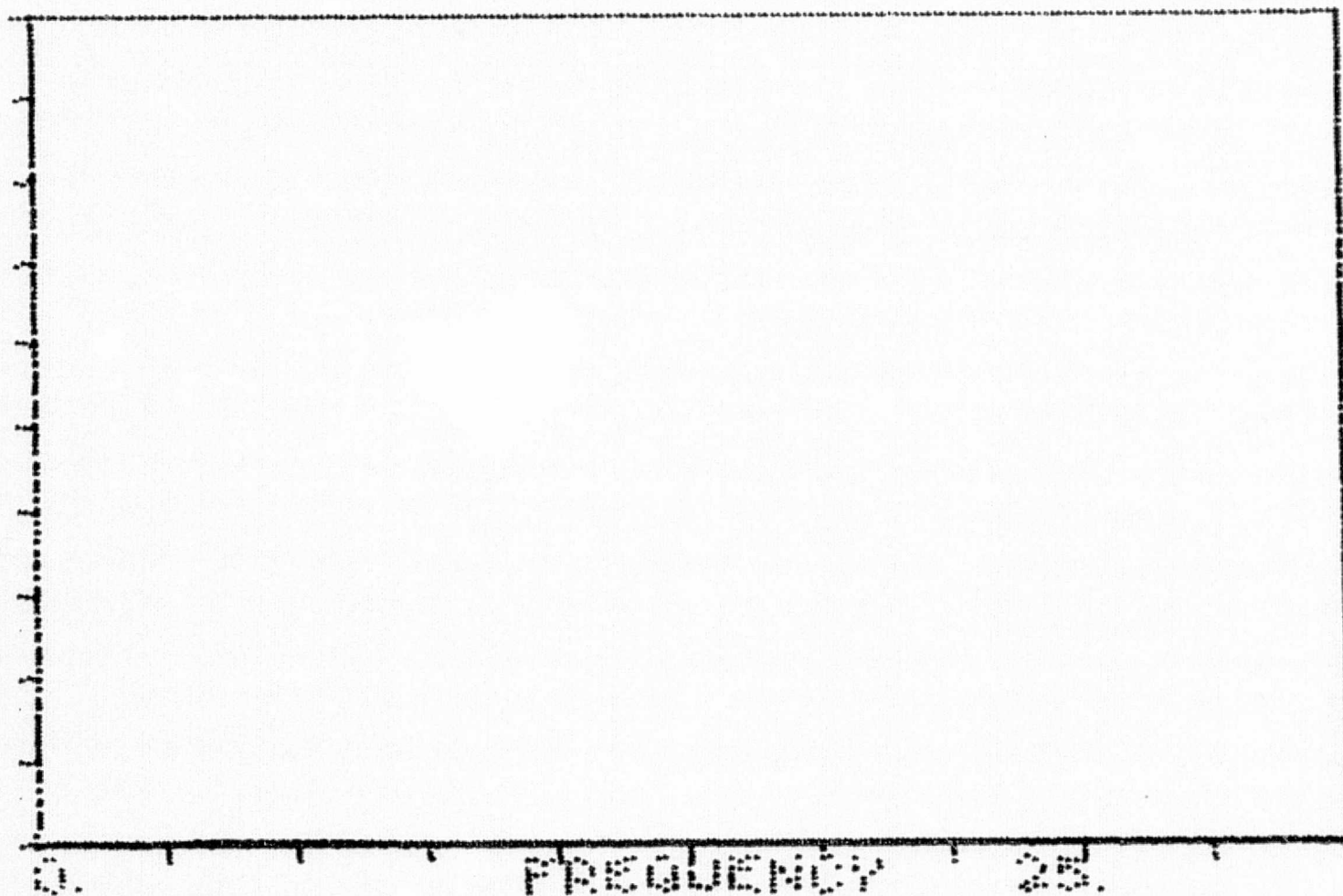
SIZE= 256



XXXX

FROM

0.



COMPLEX

SIZE= 256

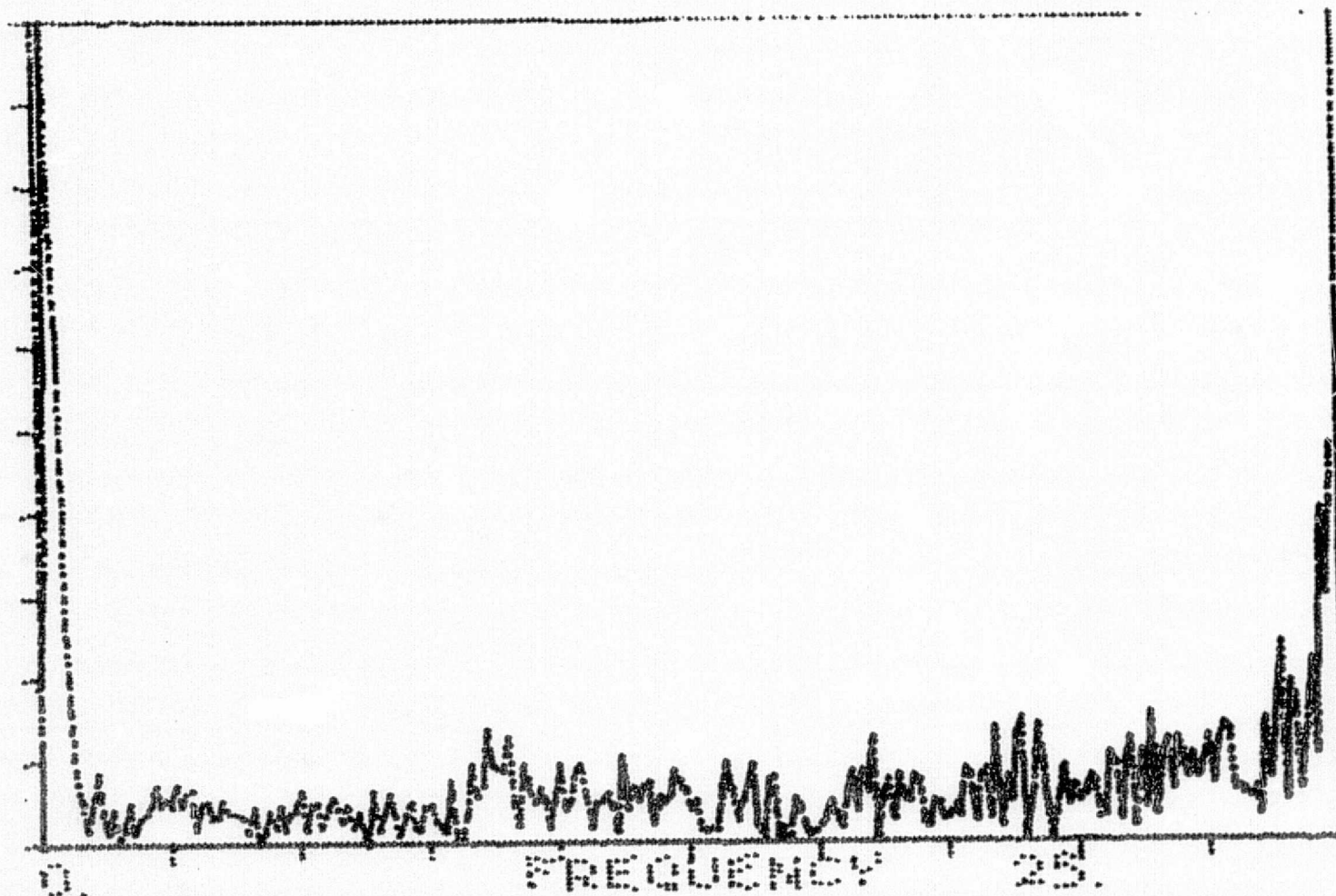
FREQUENCY

25.

8.

MAPK

0.



COMPLEX

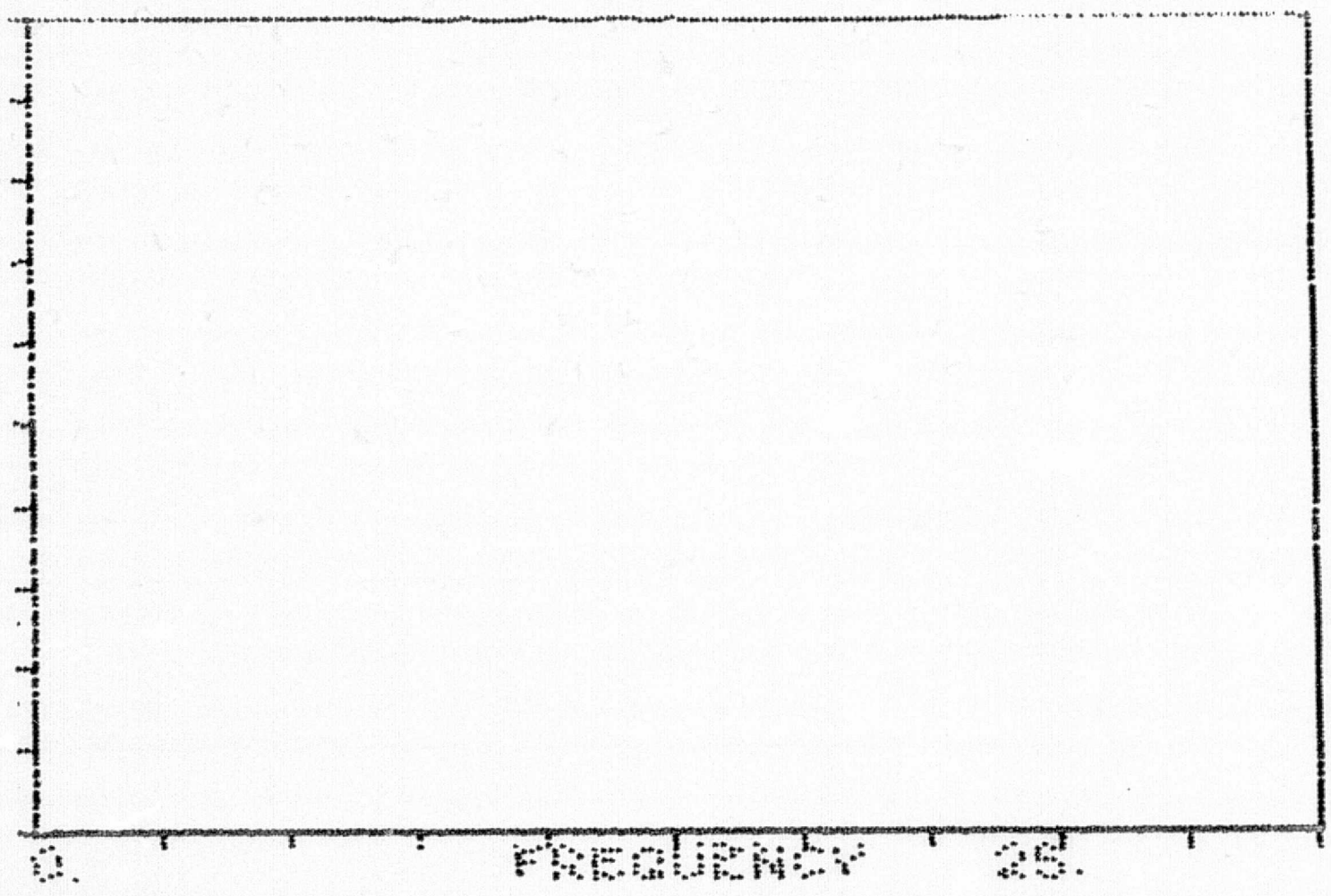
SIZE= 256

AL1/FL1

\*\*\*

MAGN

0.



COMPLEX

SIZE= 256

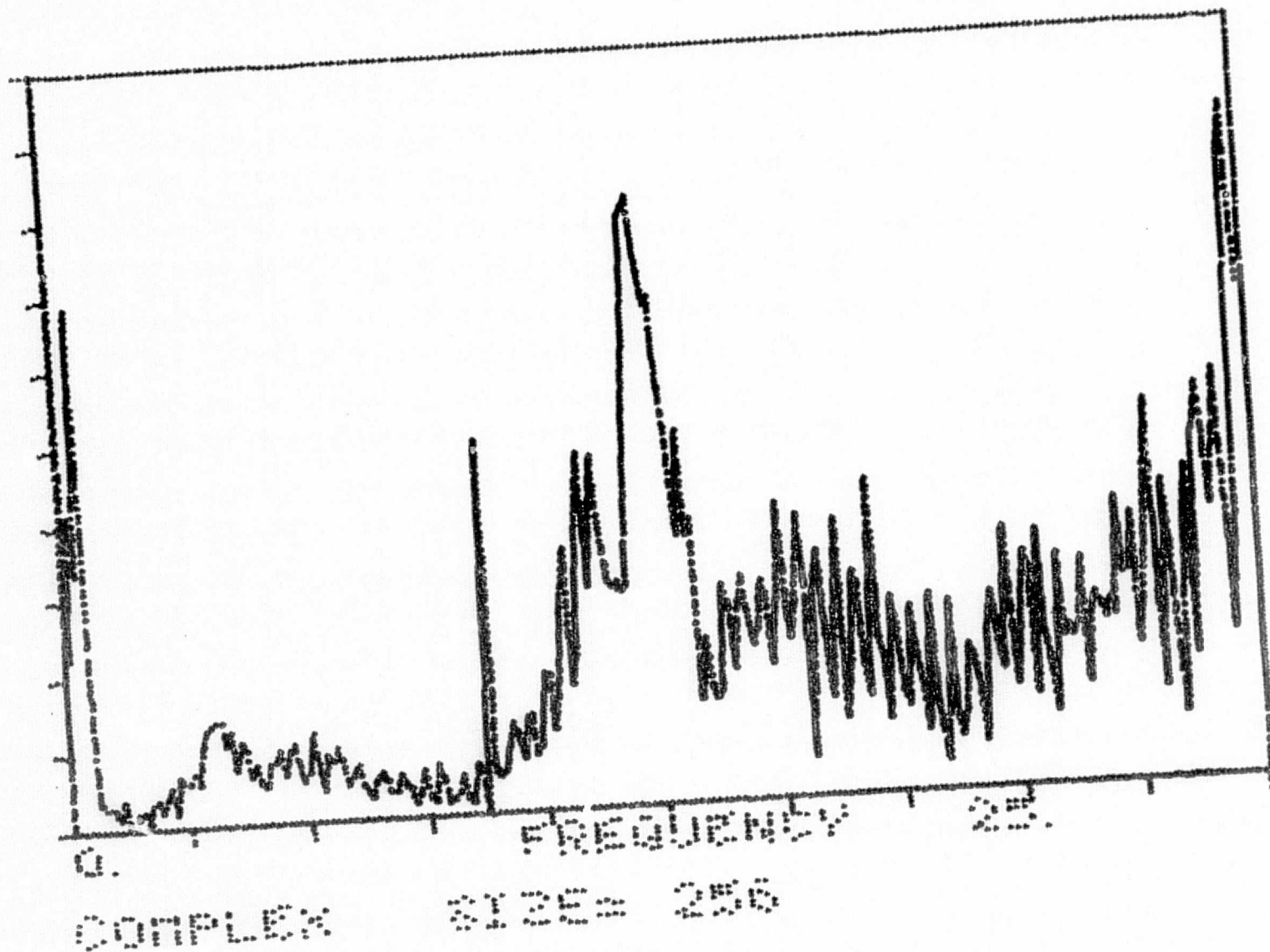
AL2/FL1



5

MAGN

a.

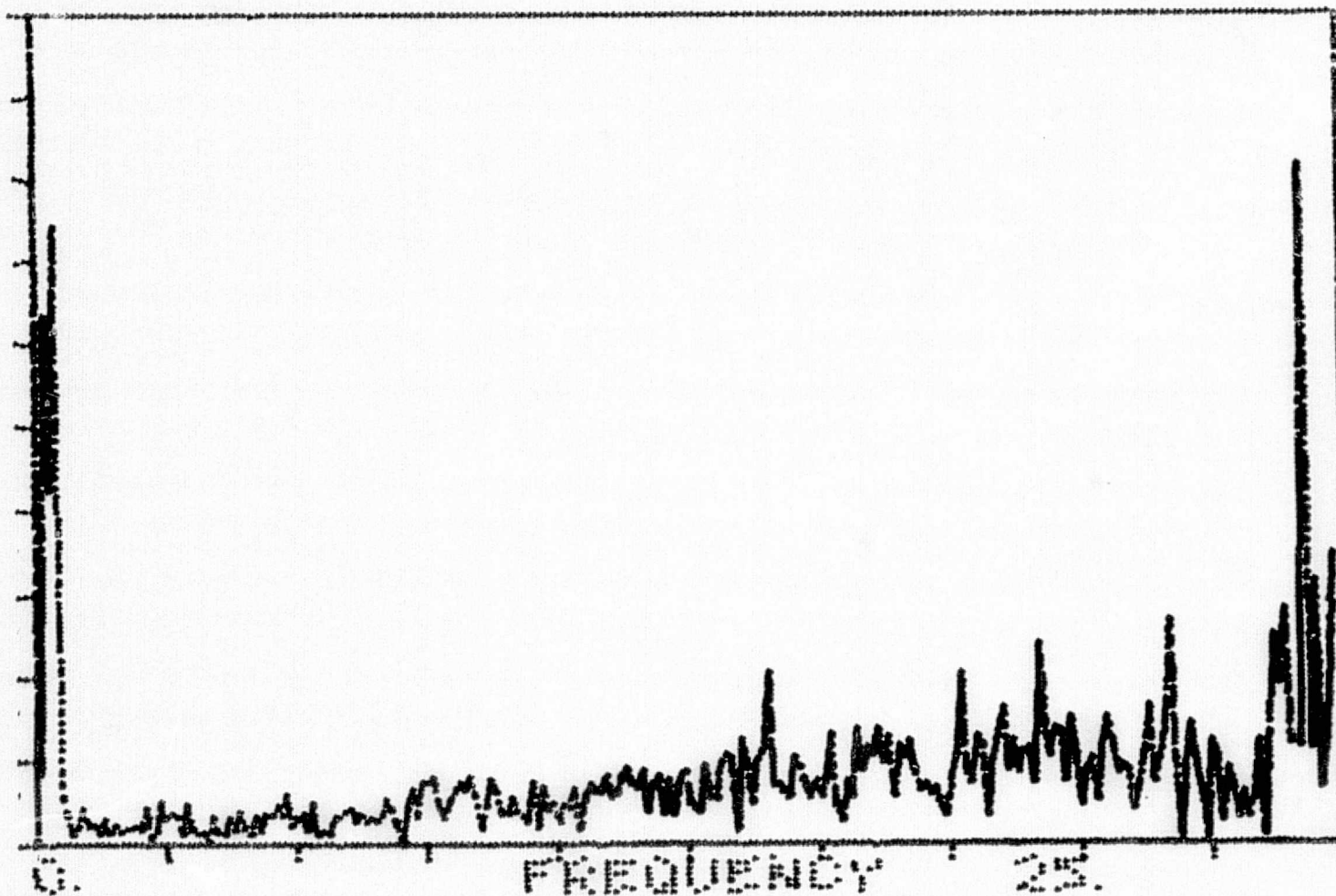


AL3/FL1

20.

MAGN

0.



COMPLEX

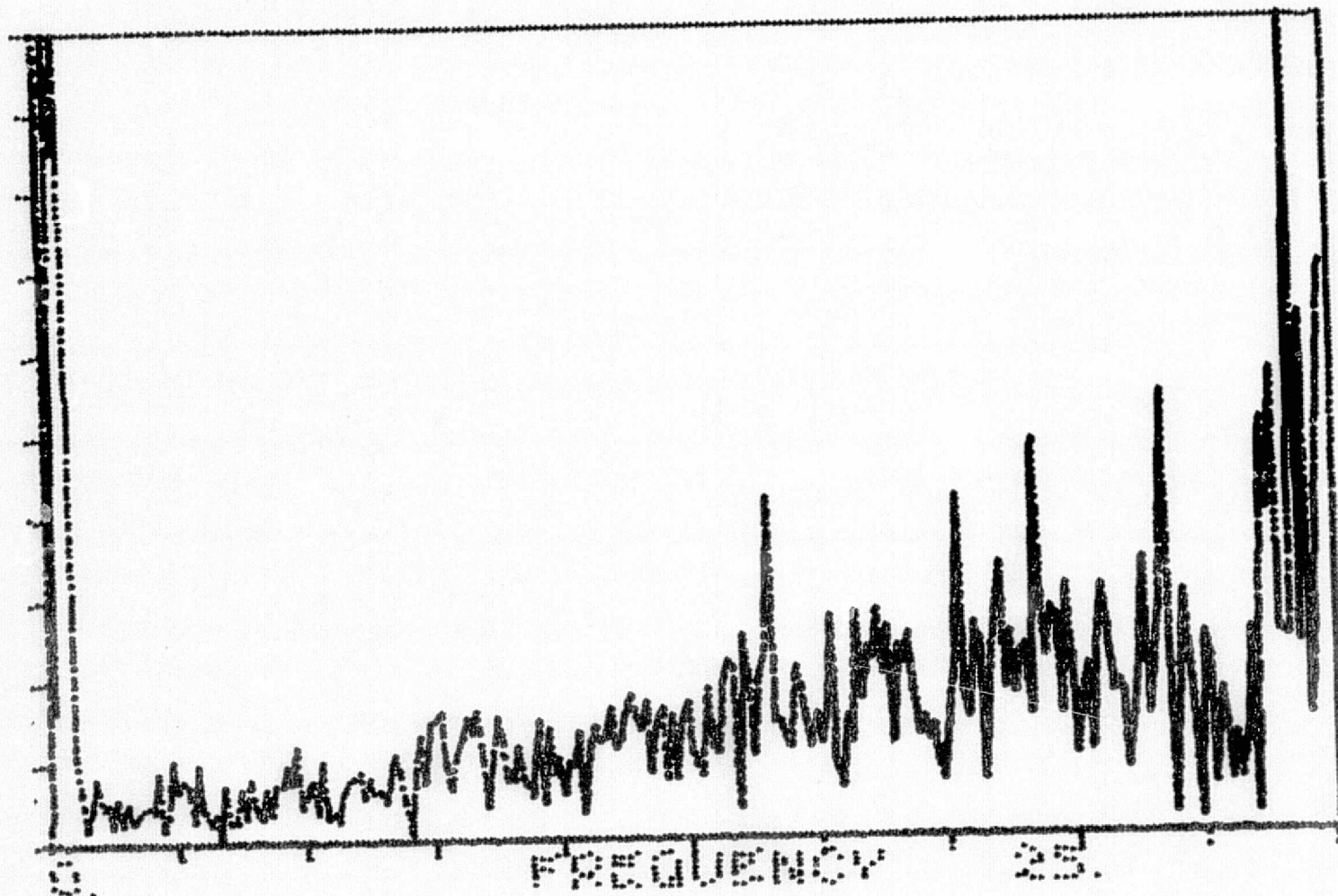
SIZE= 256



10.

1964

0.



COMPLEX

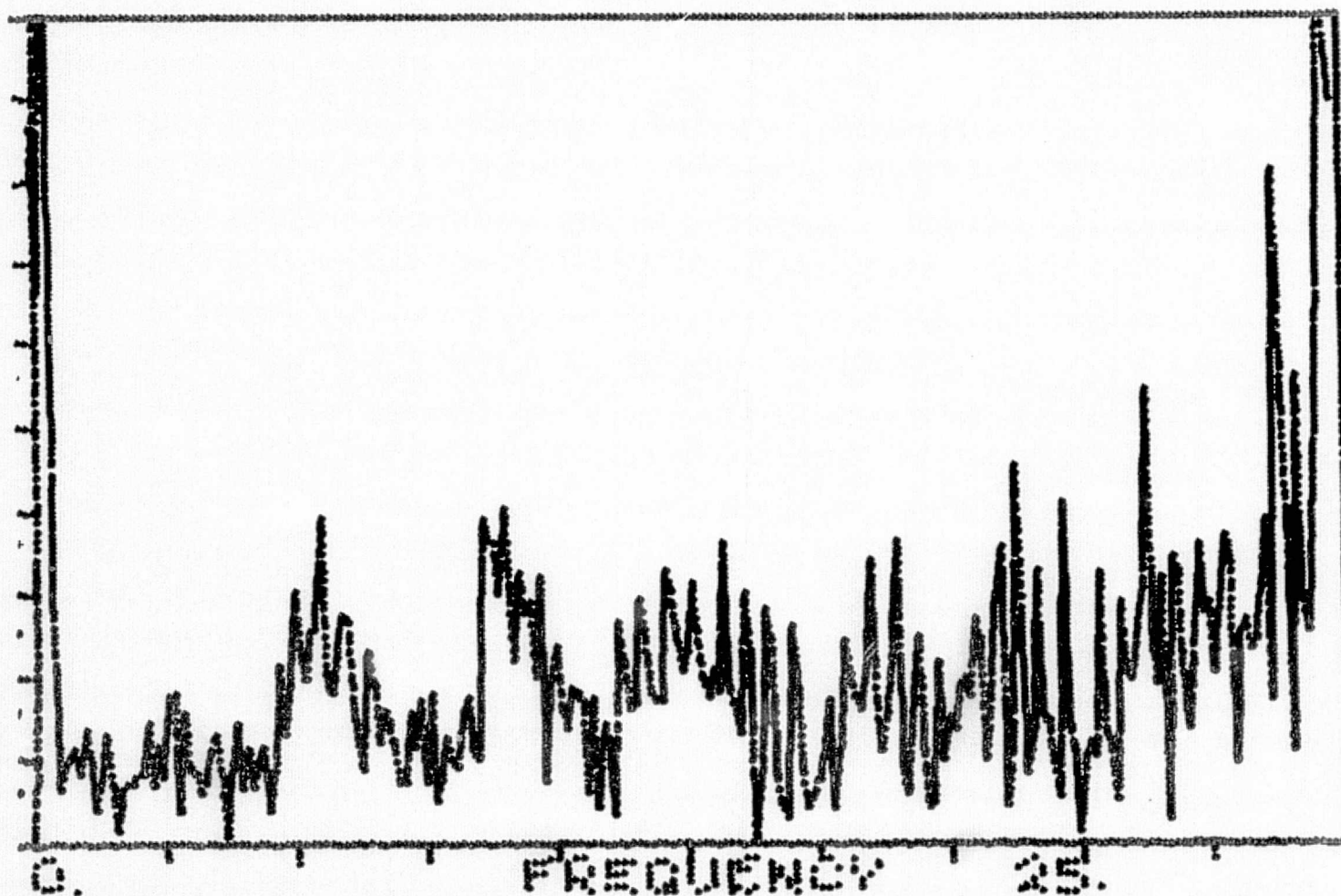
SIZE= 256

AL6/FL1

1.

MAGN

0.



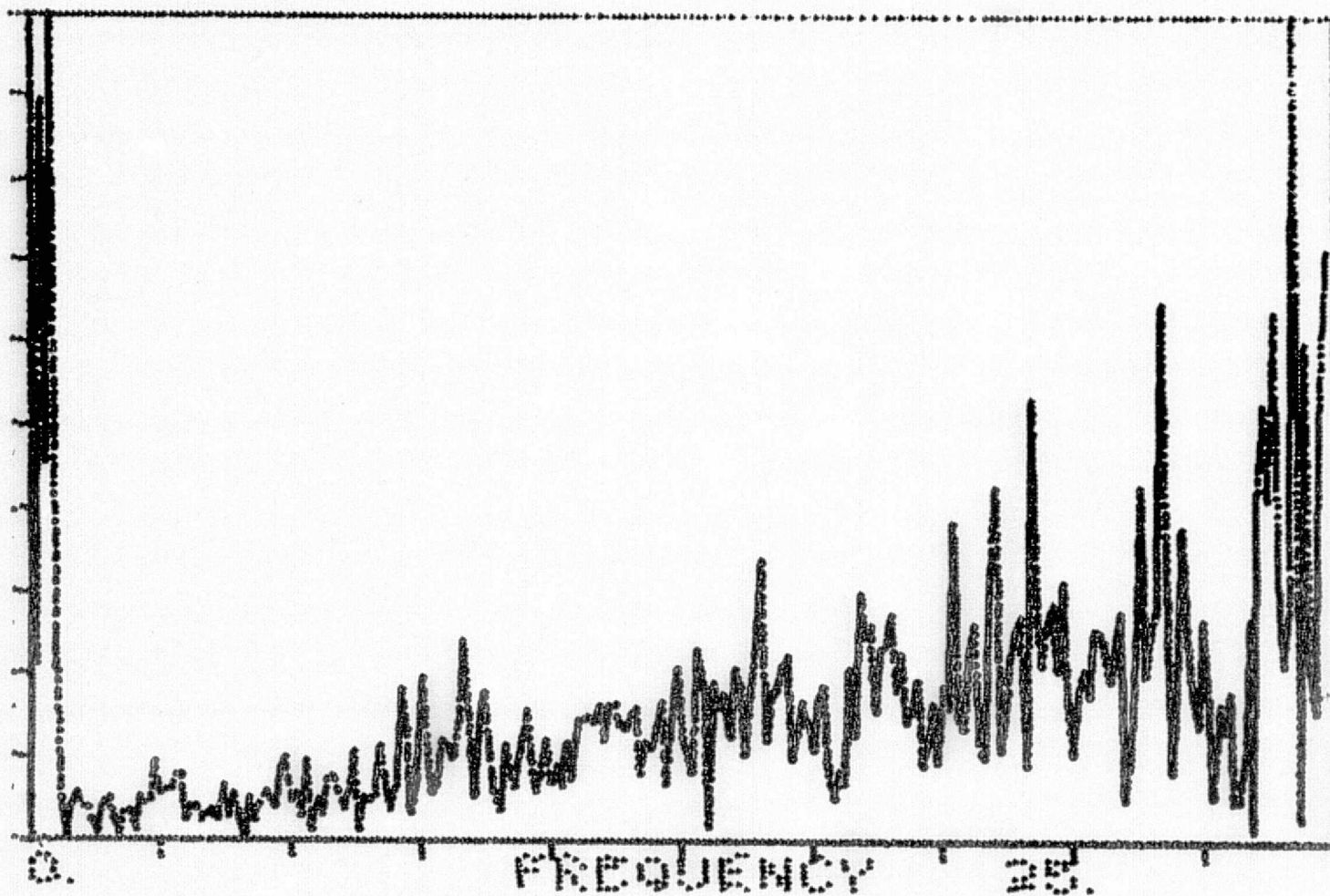
COMPLEX

SIZE= 256

30.

mag

0.



COMPLEX

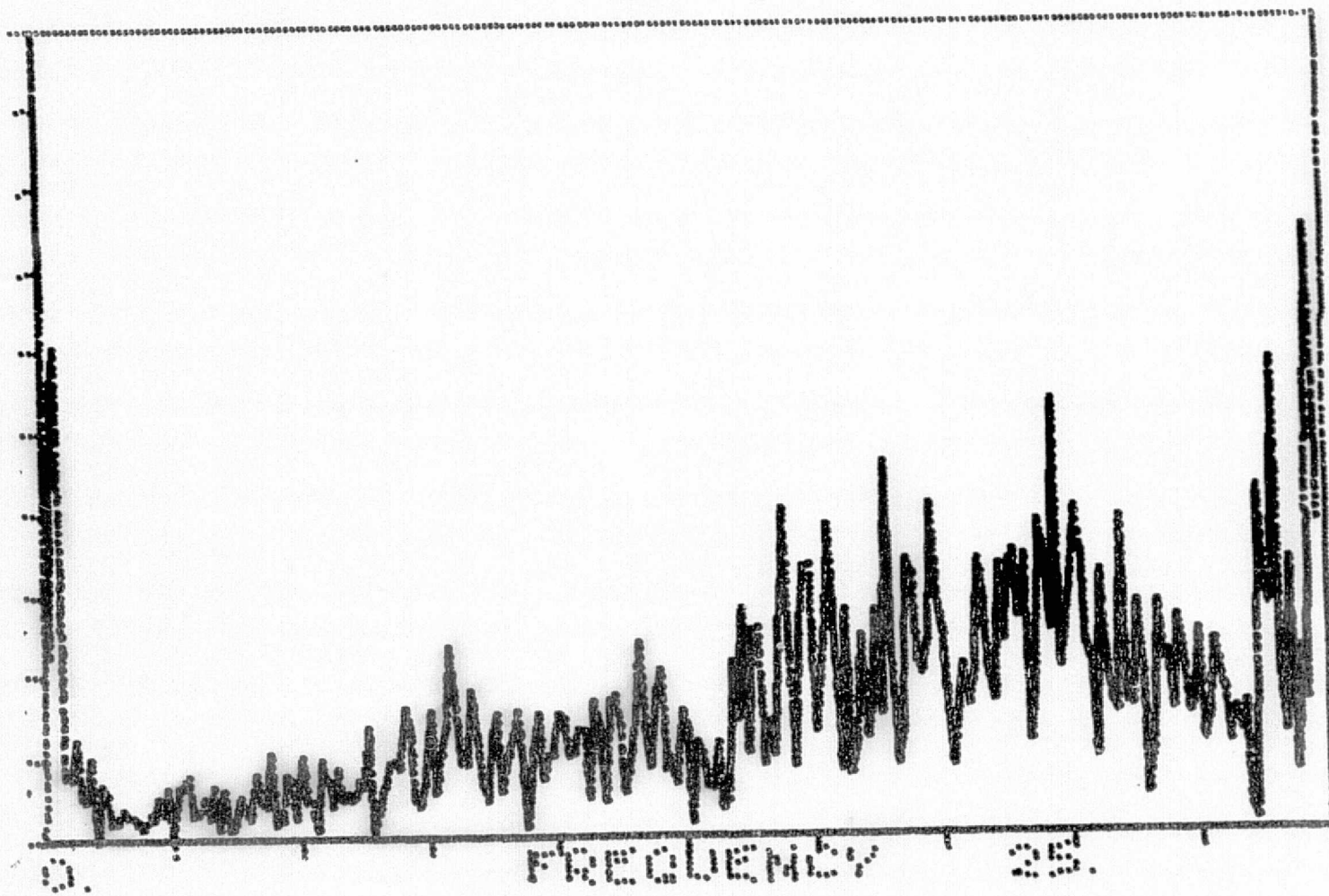
SIZE= 256



30.

mag

0.



COMPLEX

SIZE= 256

AL4/FL1



20.

NRGM

0.

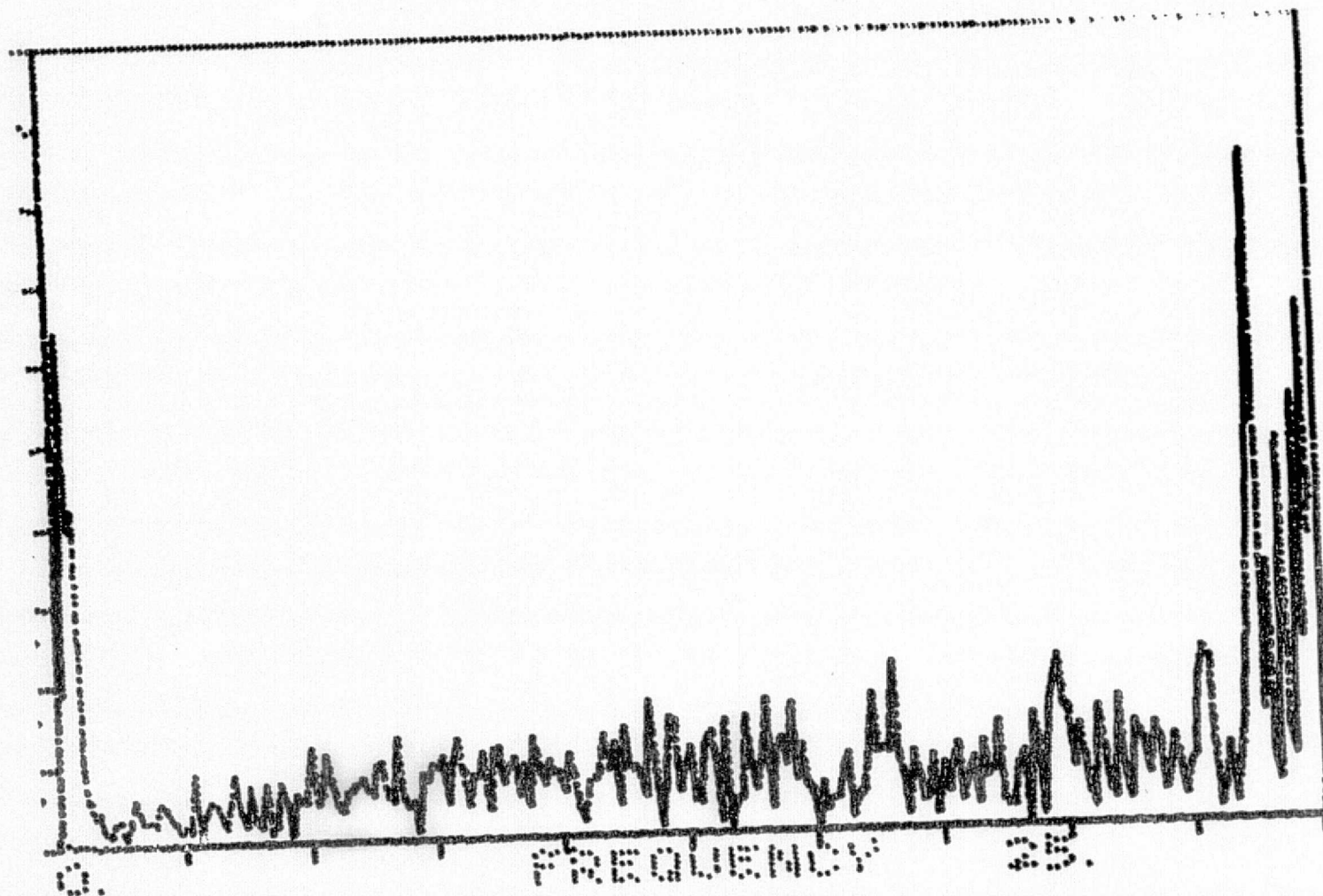
0.

COMPLEX

SIZE= 256

FREQUENCY

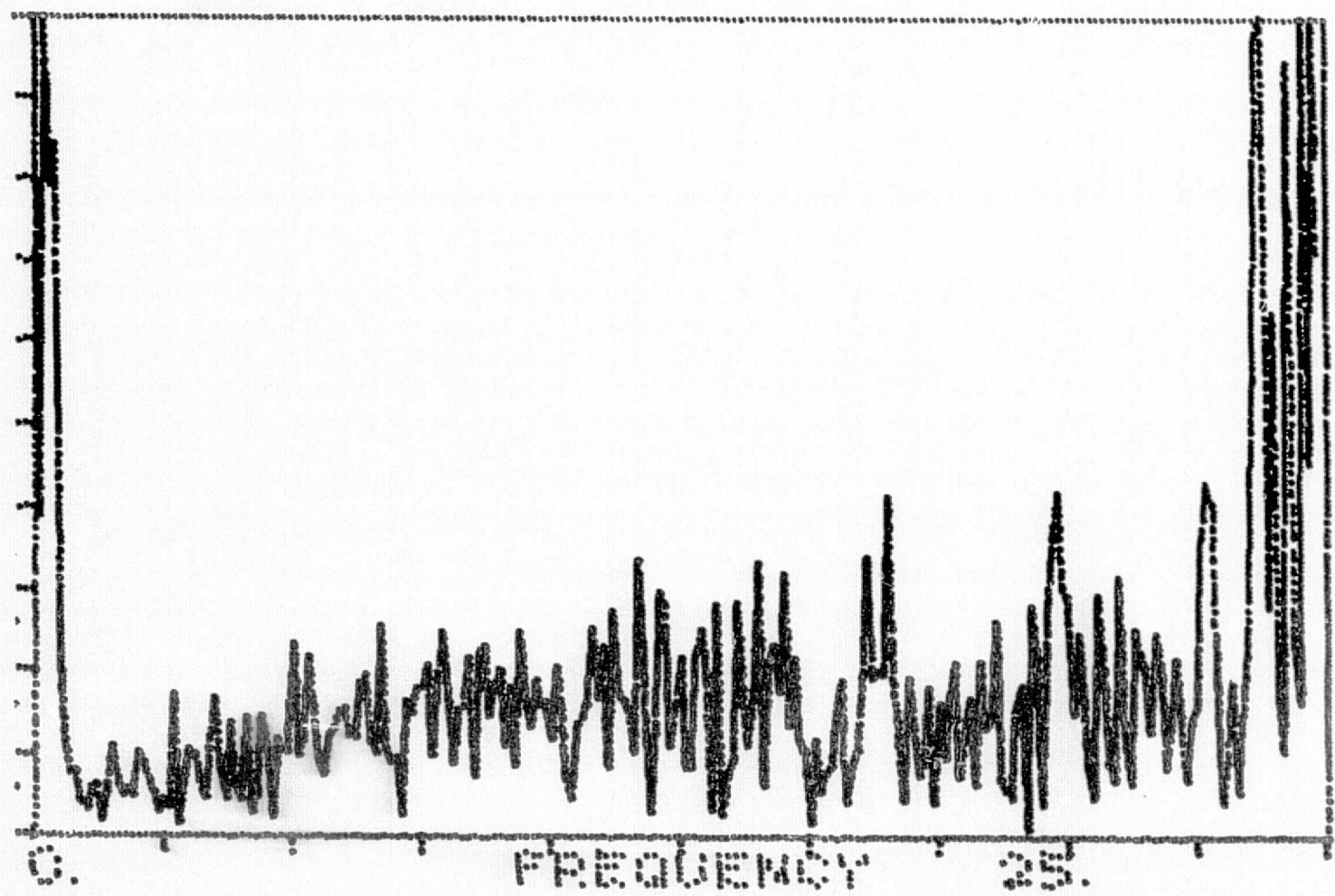
25.



10.

1100N

0.

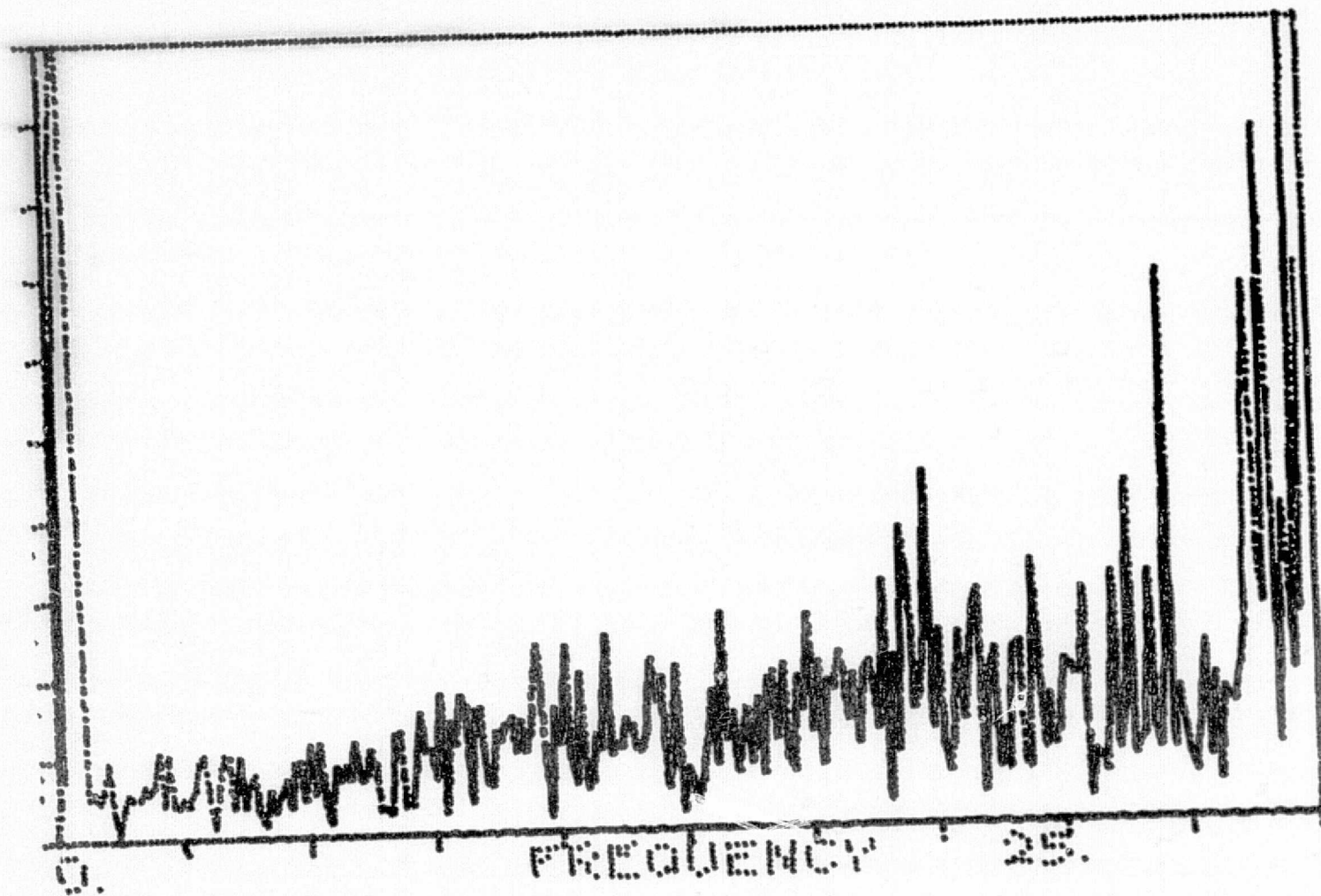


0. FREQUENCY 25.  
COMPLEX SIZE= 256

30.

1140H

0.



COMPLEX

SIZE\* 256

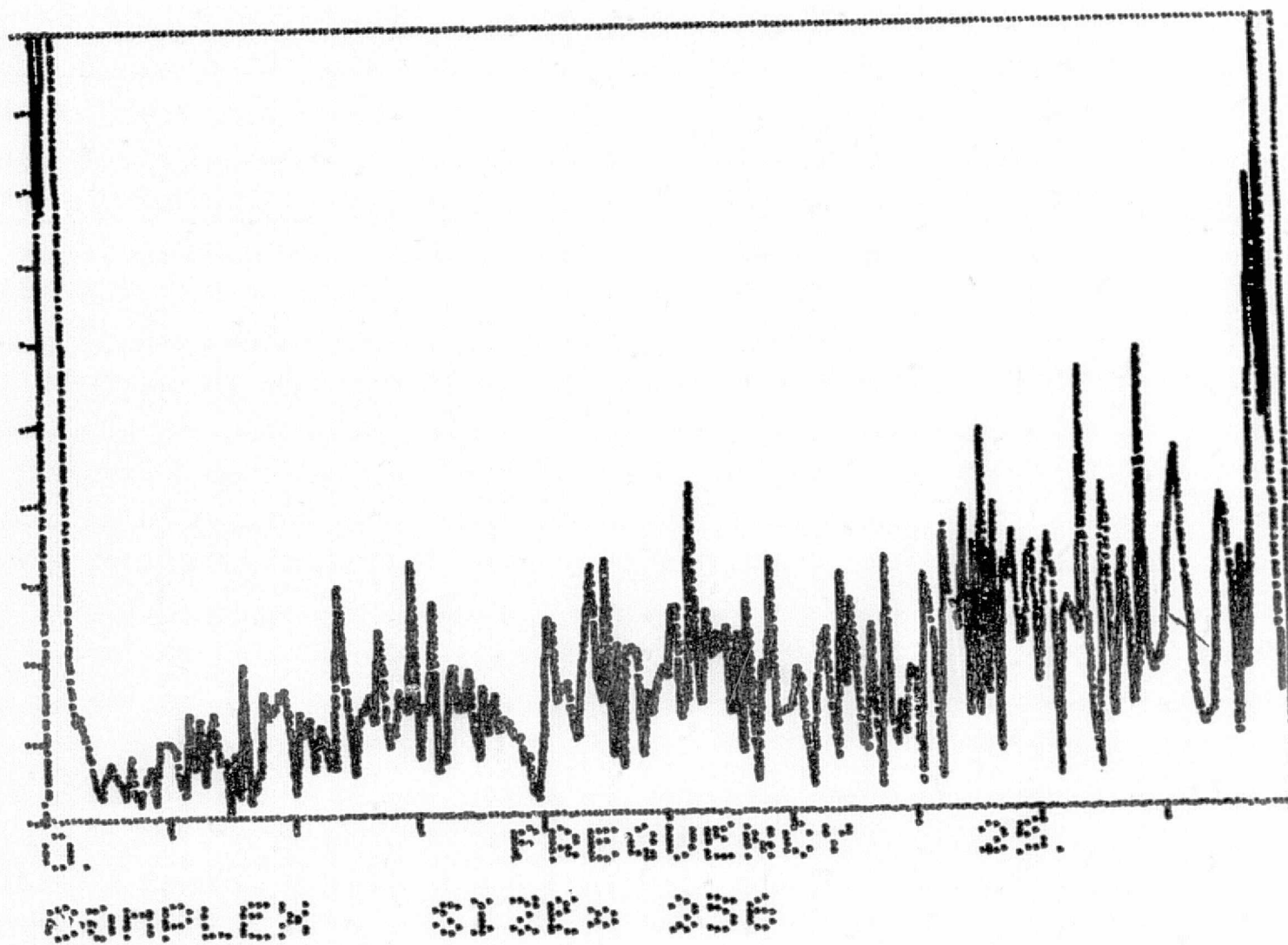
AL8/FL1



10.

MAGN

0.



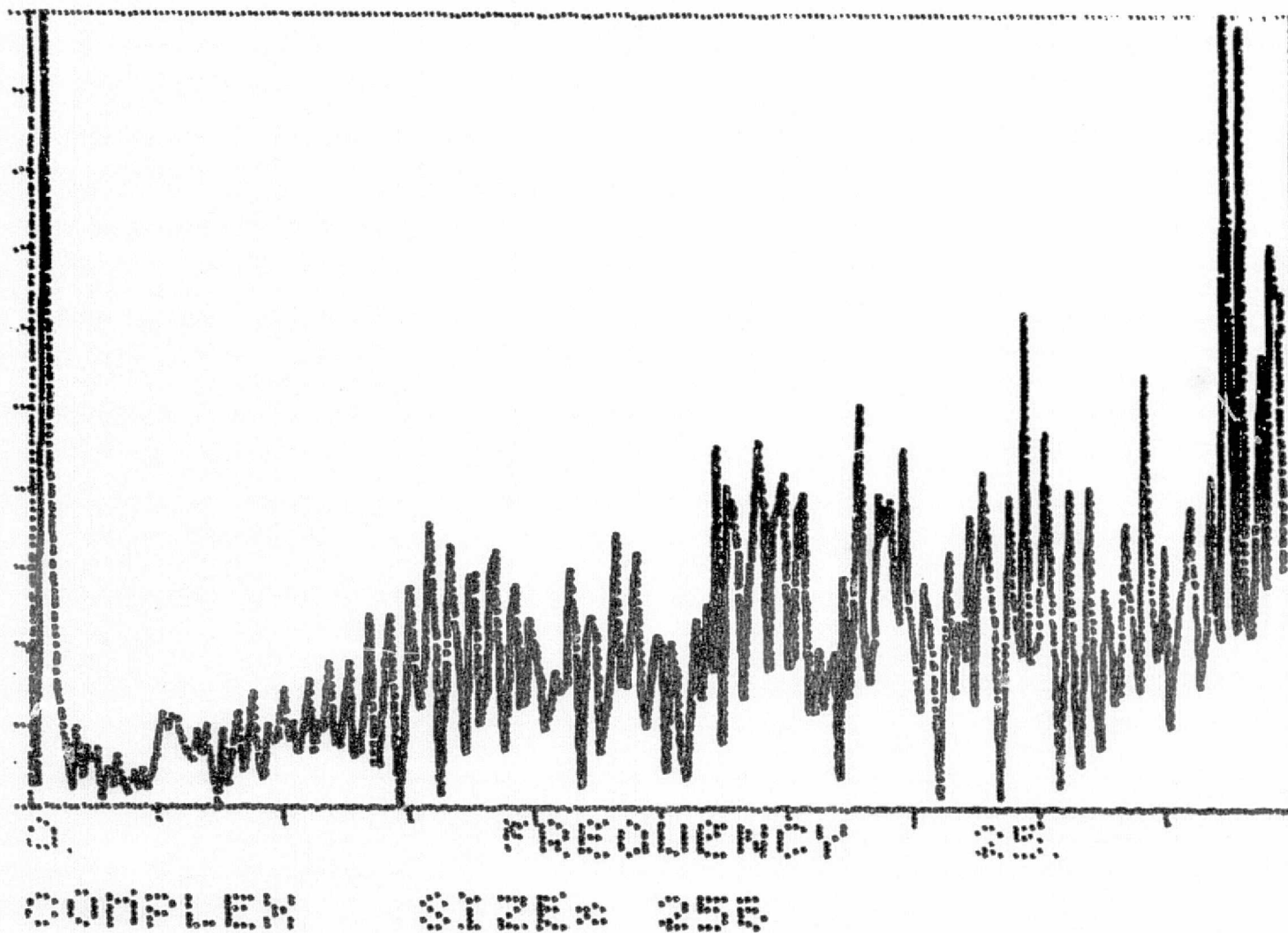
AL9/FL1



5.

1100N

0.

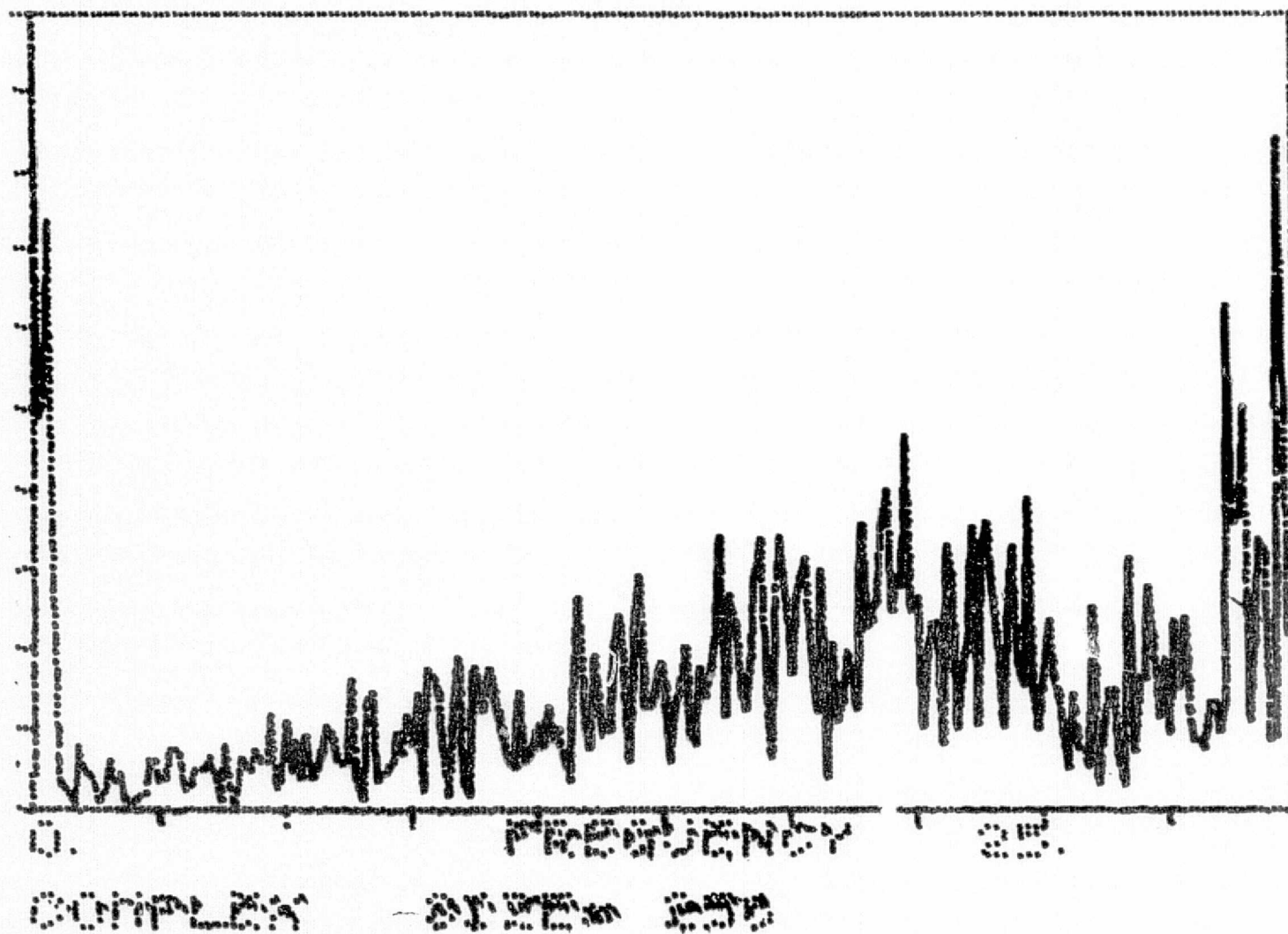


AL10/FL1

10.

MACH

0.

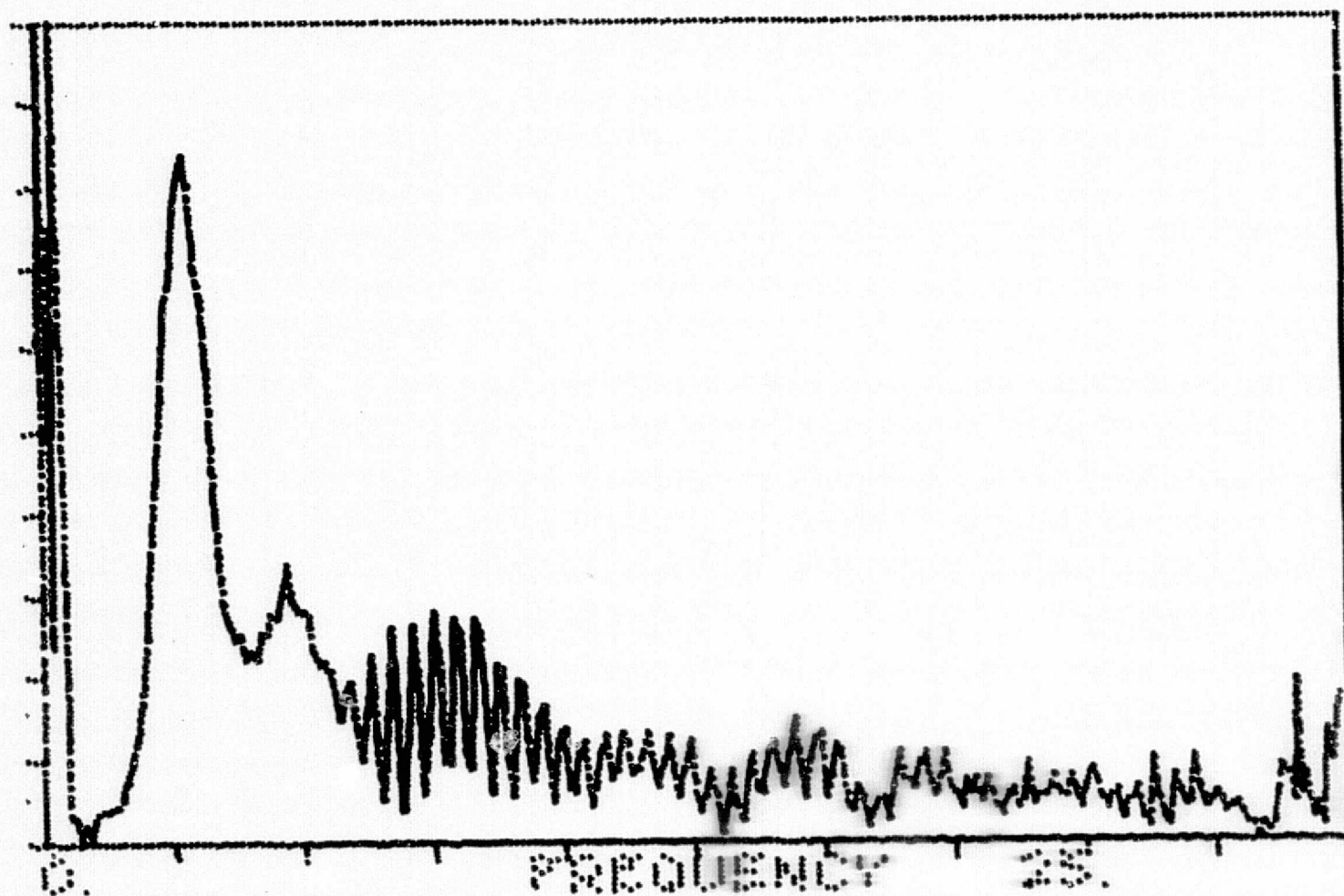


AL12/FL1

1.

MAON

0.



COMPLEX

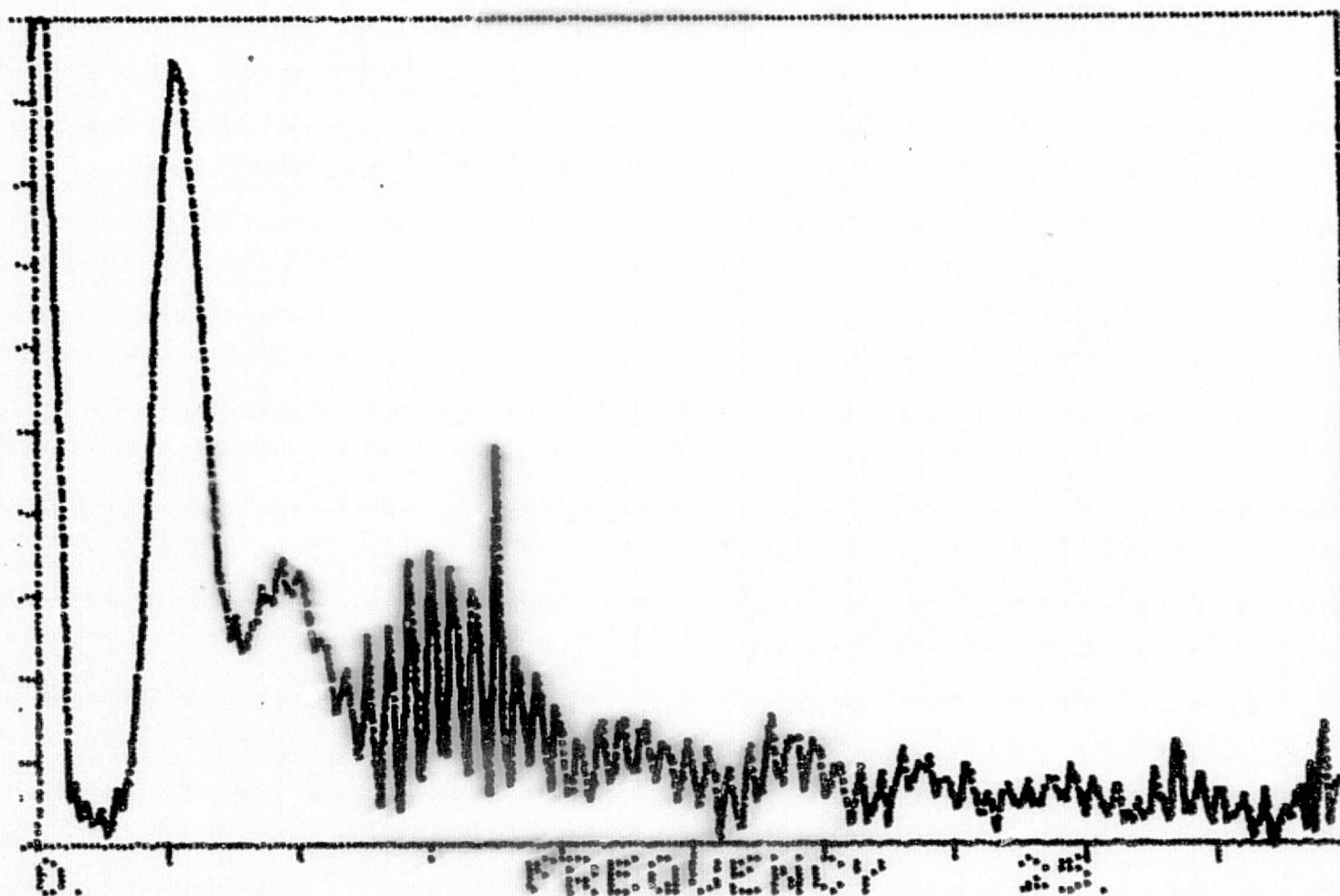
SIZE= 256

DL1/FL1

1.

mach

0.



COMPLEX

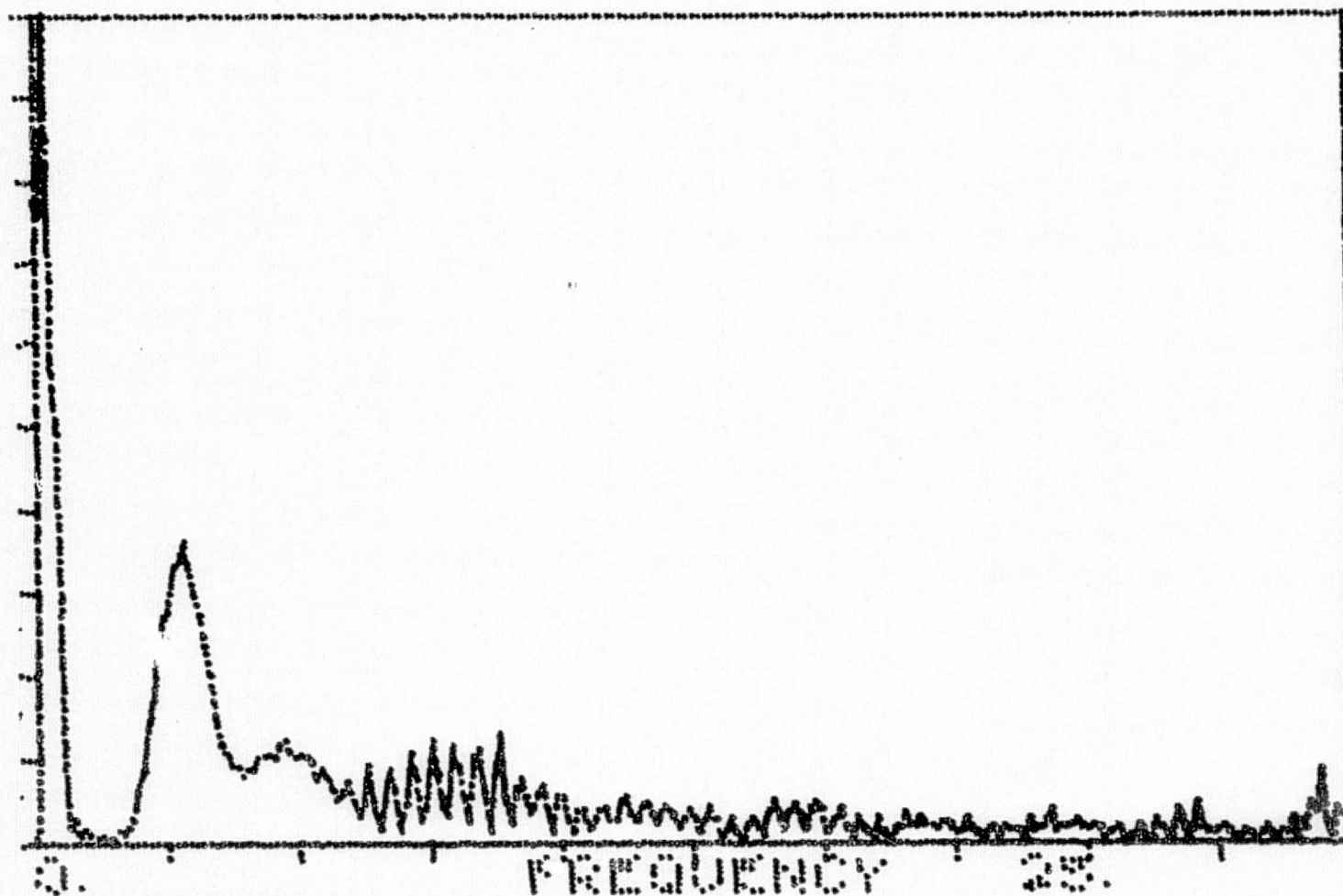
SIZE= 256



3.

mag

0.



COMPLEX

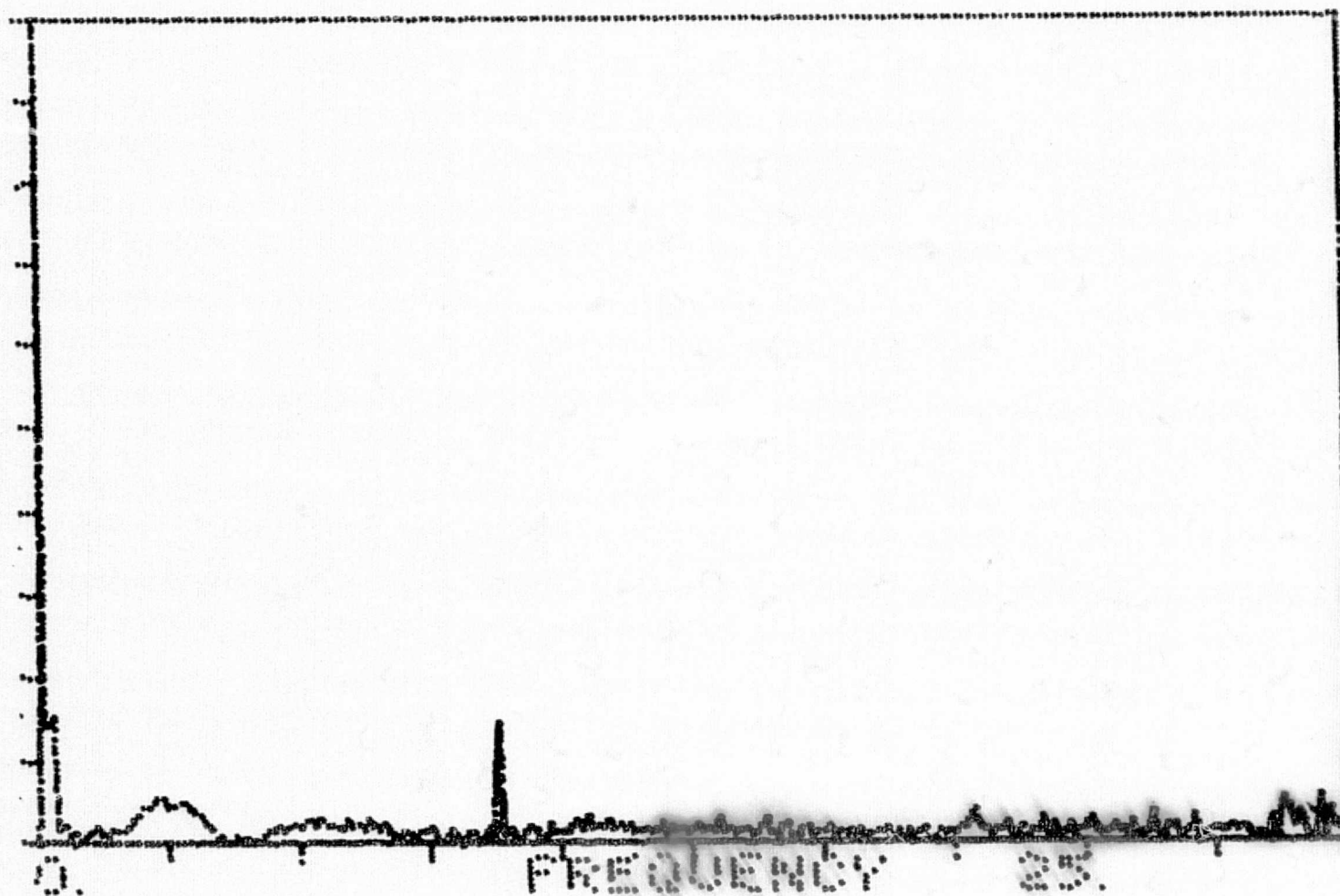
SIZE= 255

DL3/FL1

1.

MAGN

0.



COMPLEX

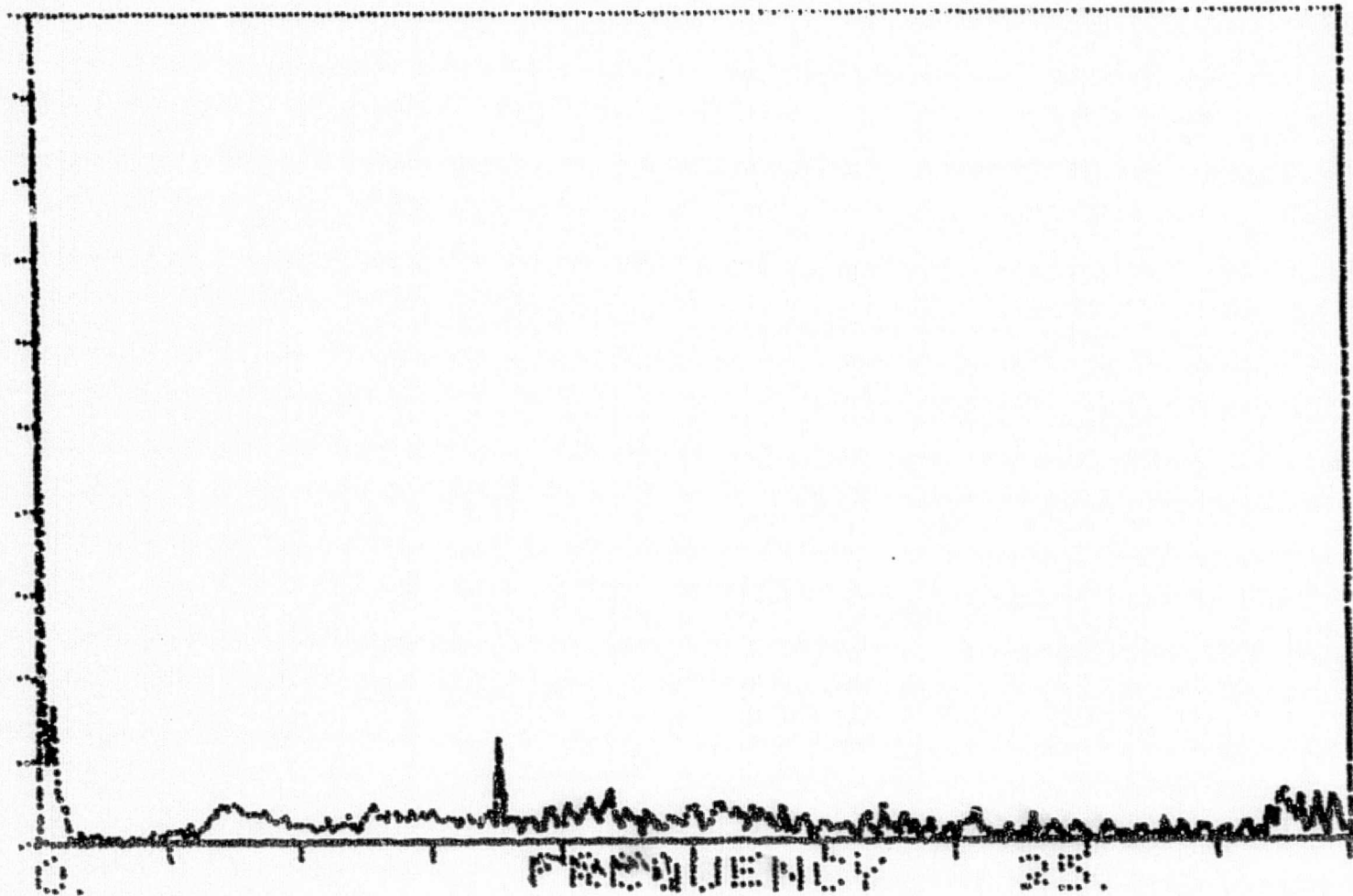
SIZE= 356

DL4/FL1

1.

19804

0.



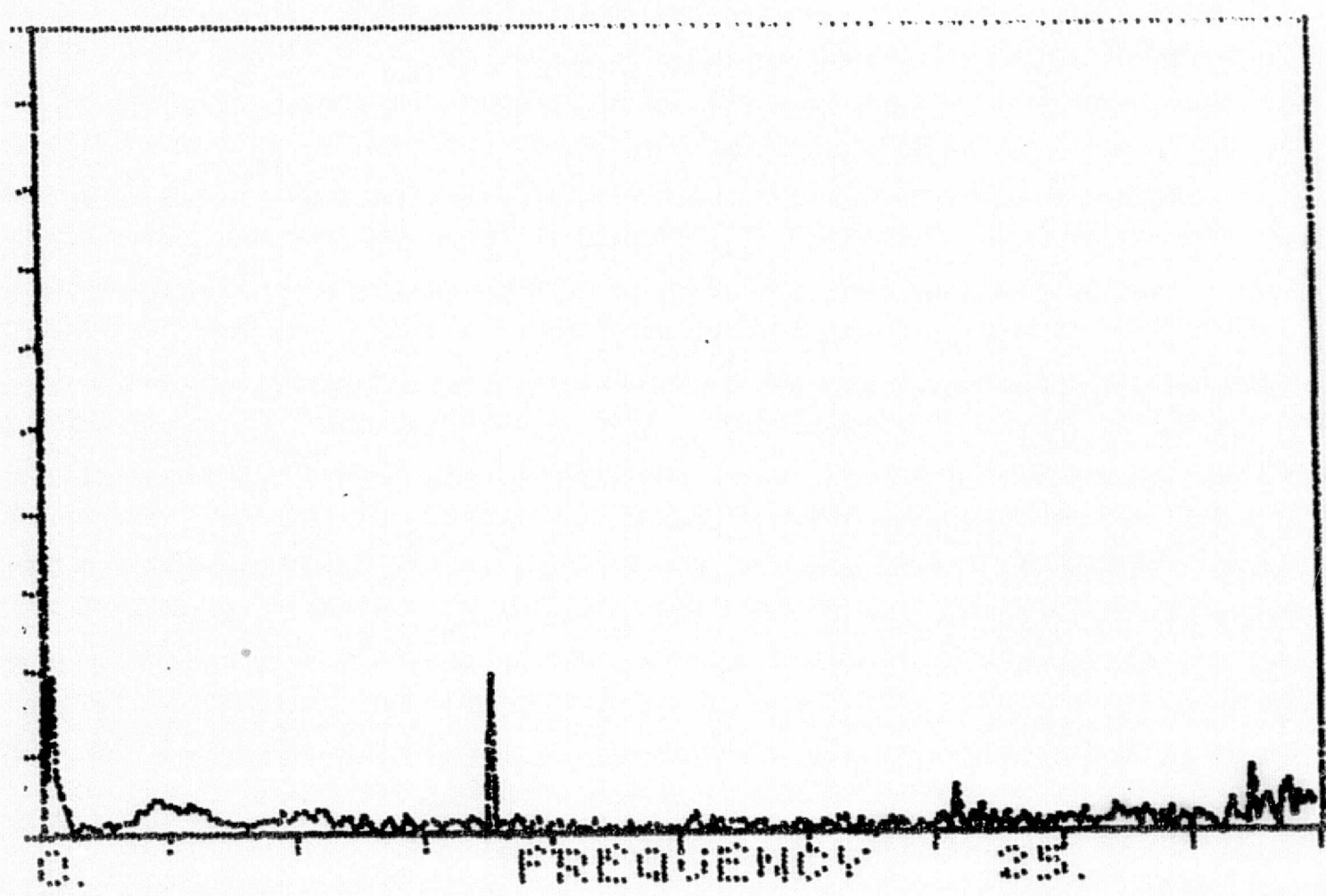
COMPLEX

SIZE= 256

3.

NRON

0.

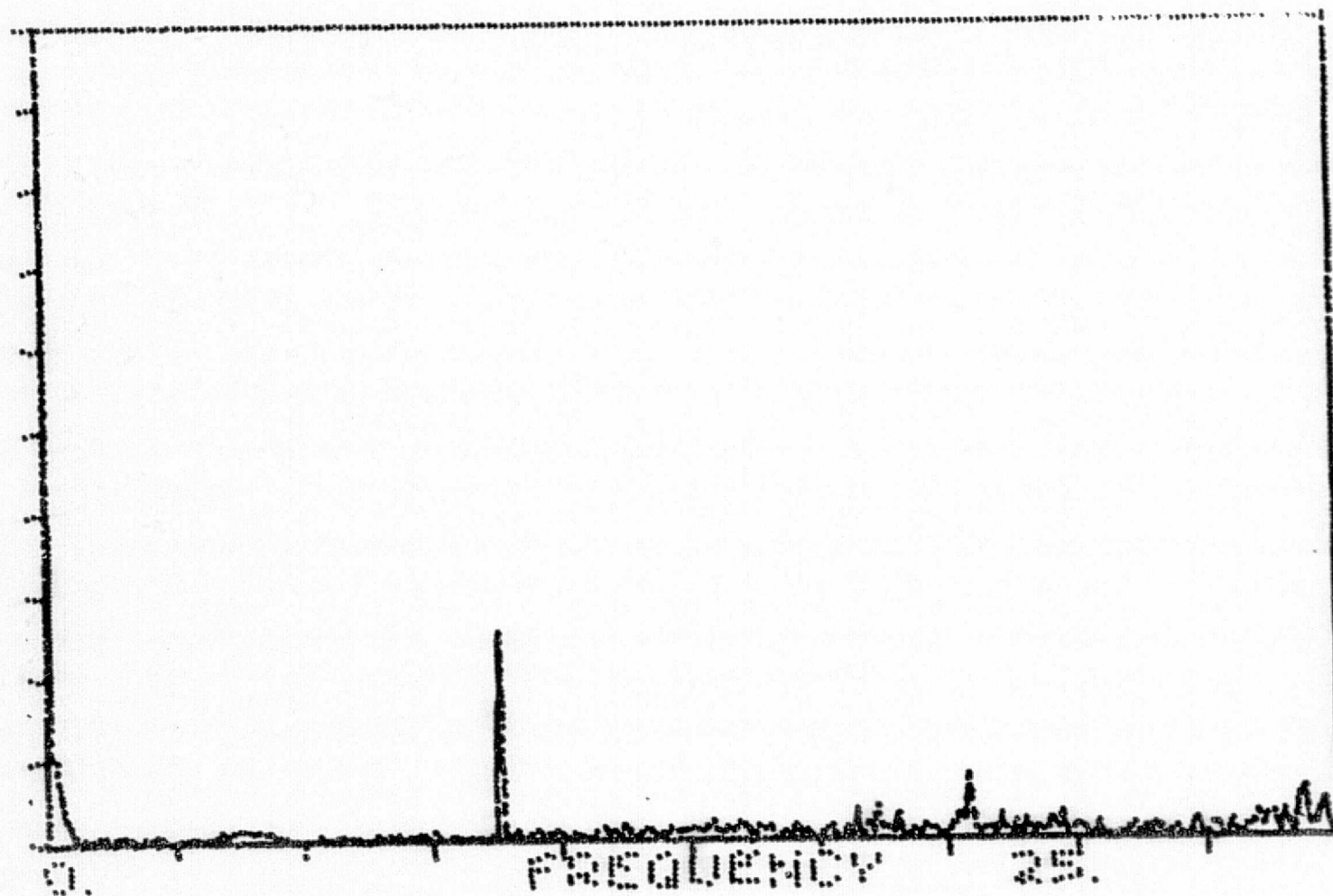




1.

MAGN

0.



COMPLEX

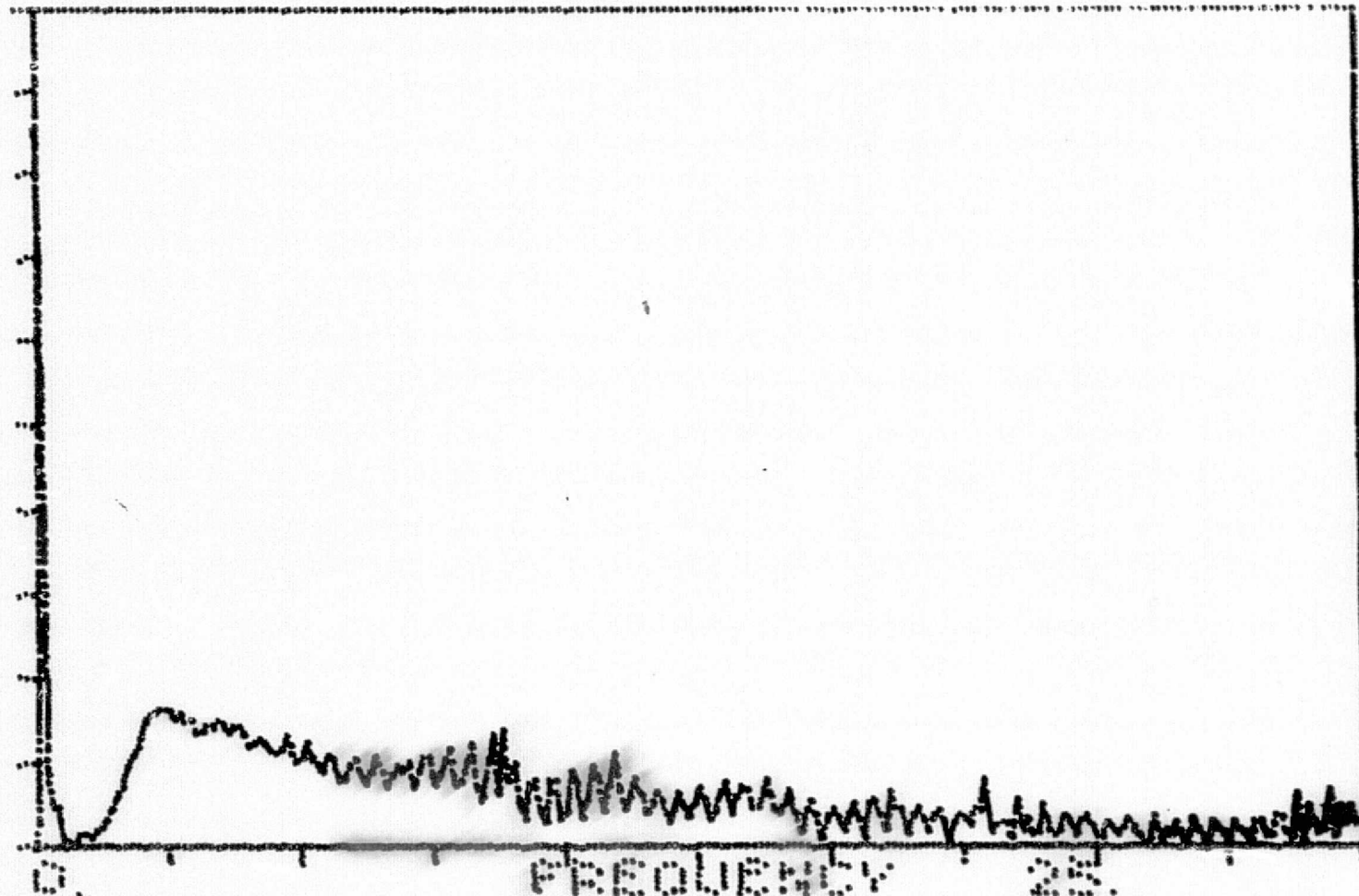
SIZE: 250

DL7/FL1

1.

MAGN

0.



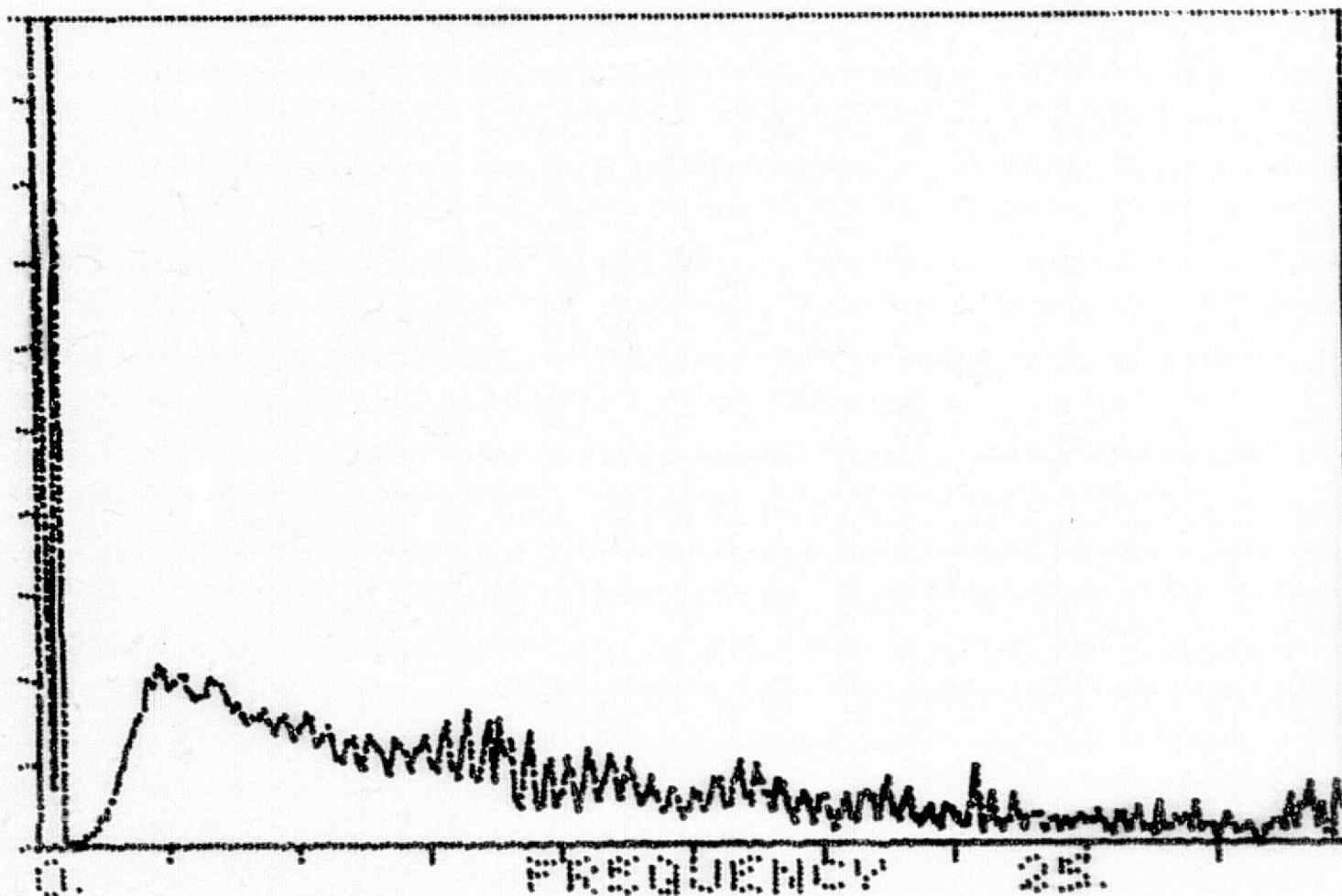
COMPLEX

SIZE= 256

1.

MAGN

0.



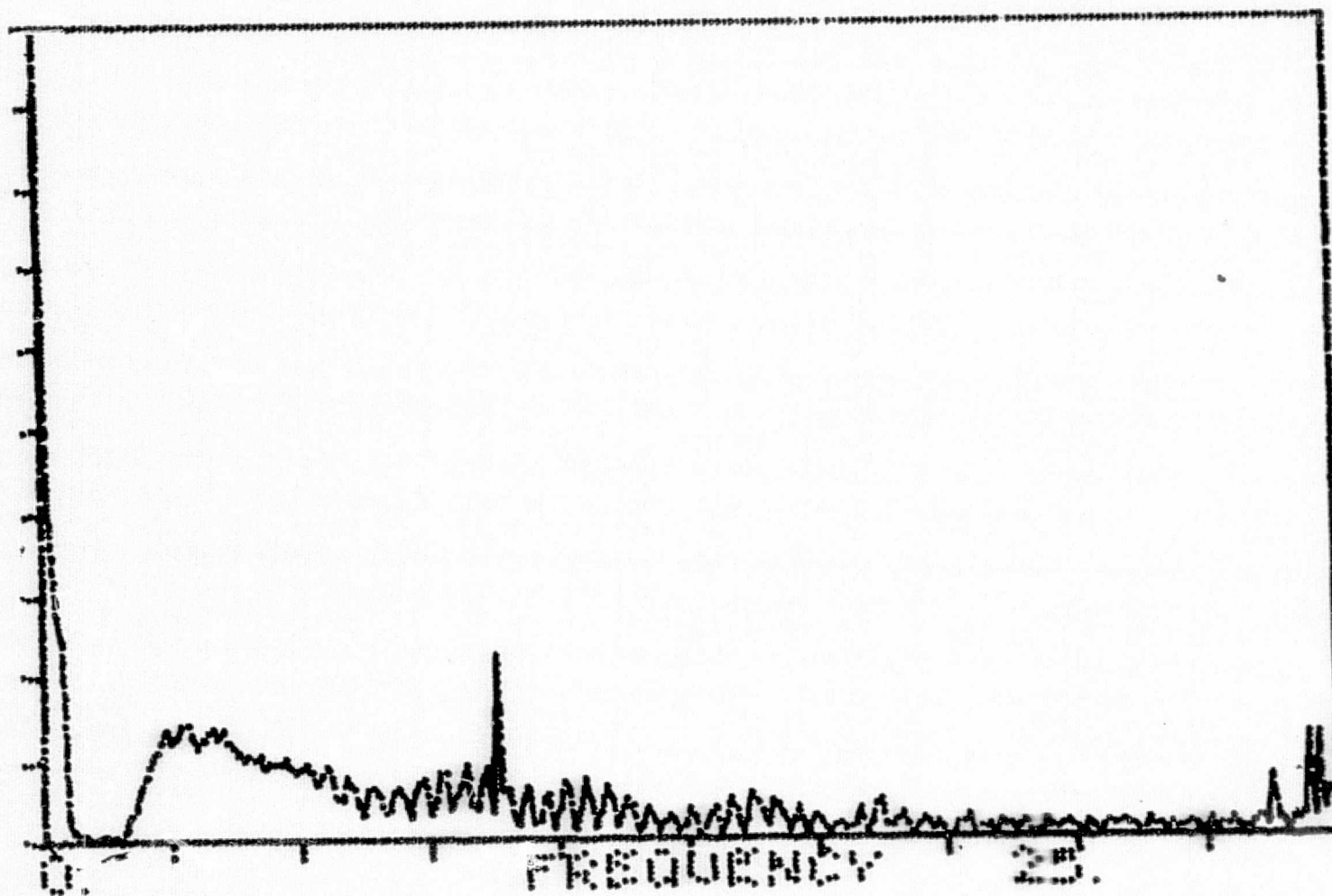
COMPLEX

SIZE= 256

3.

MAGN

0.



COMPLEX

SIZE= 256

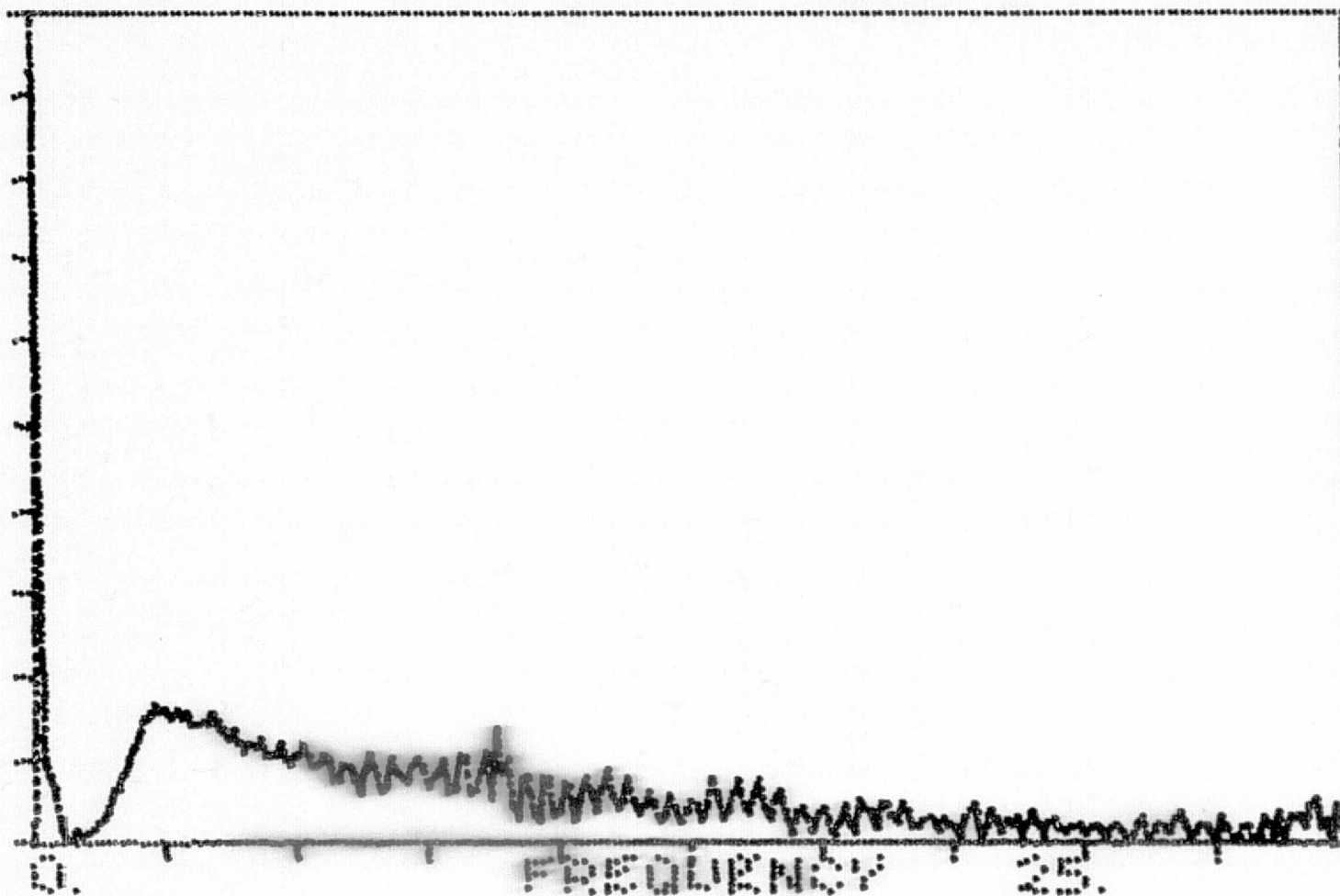
DL10/FL1



1.

MACH

0.



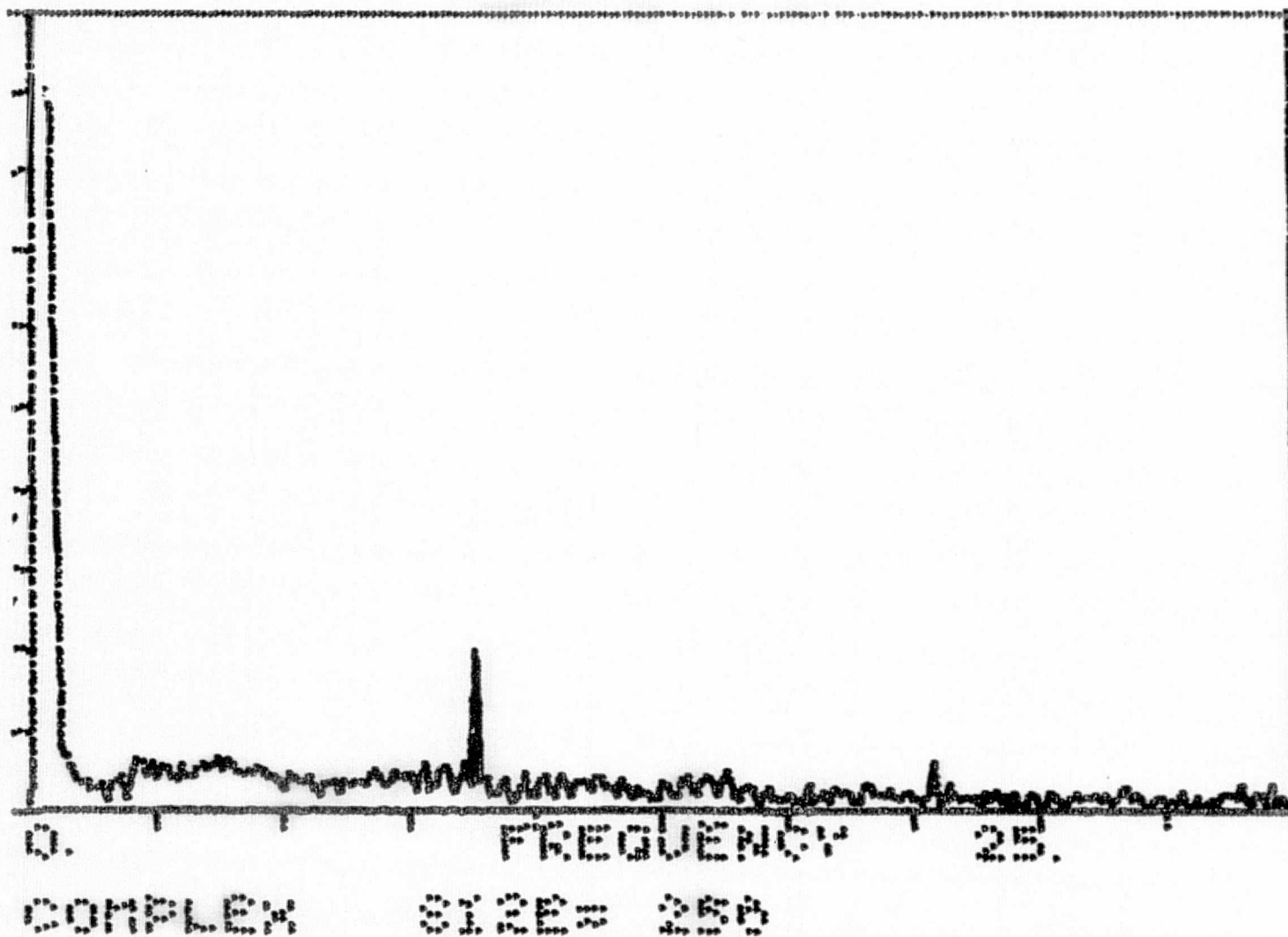
COMPLEX

SIZE= 256

1.

NAME

2.

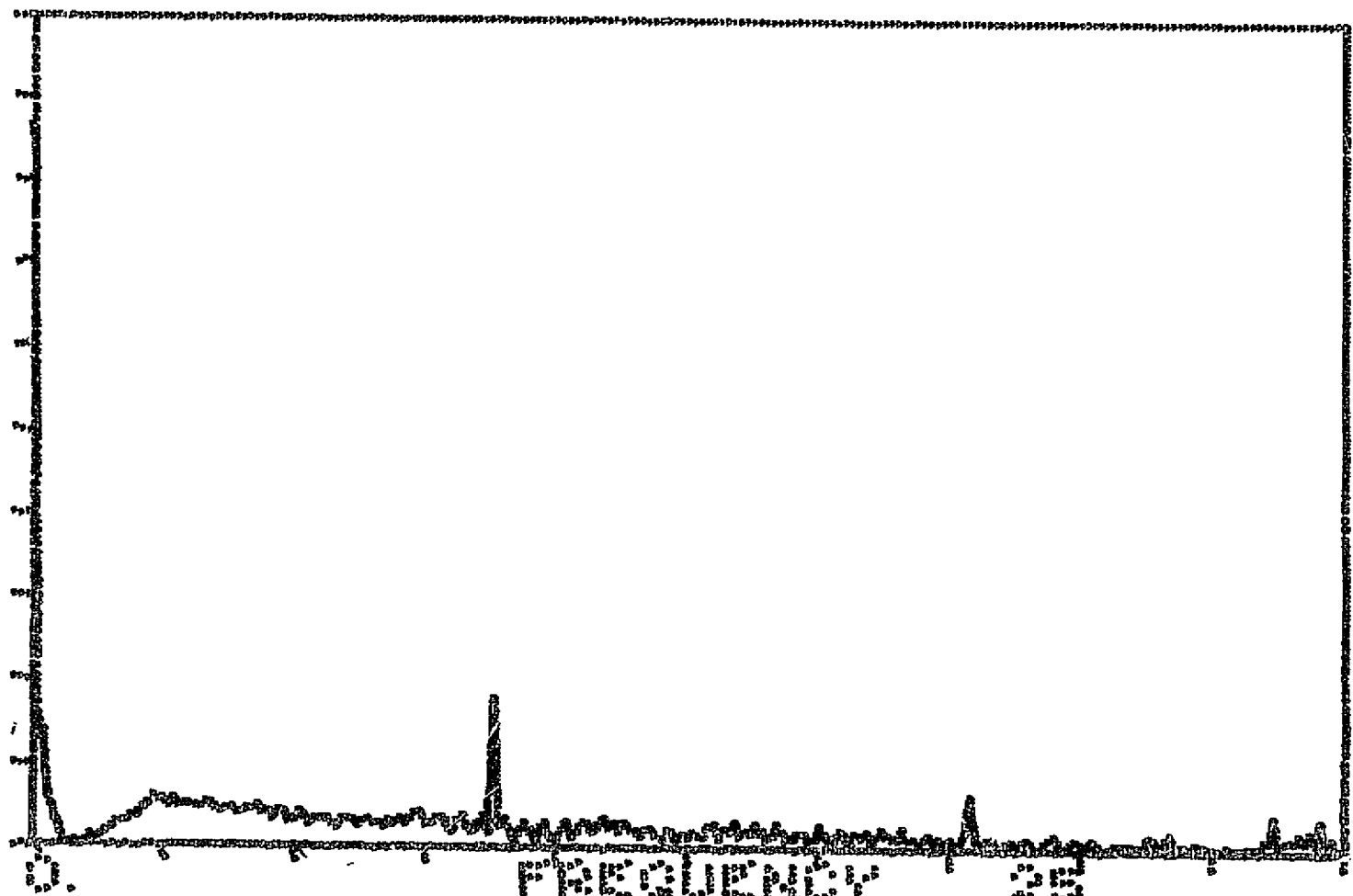


DL12/FL1

10  
C-2

4.

1960

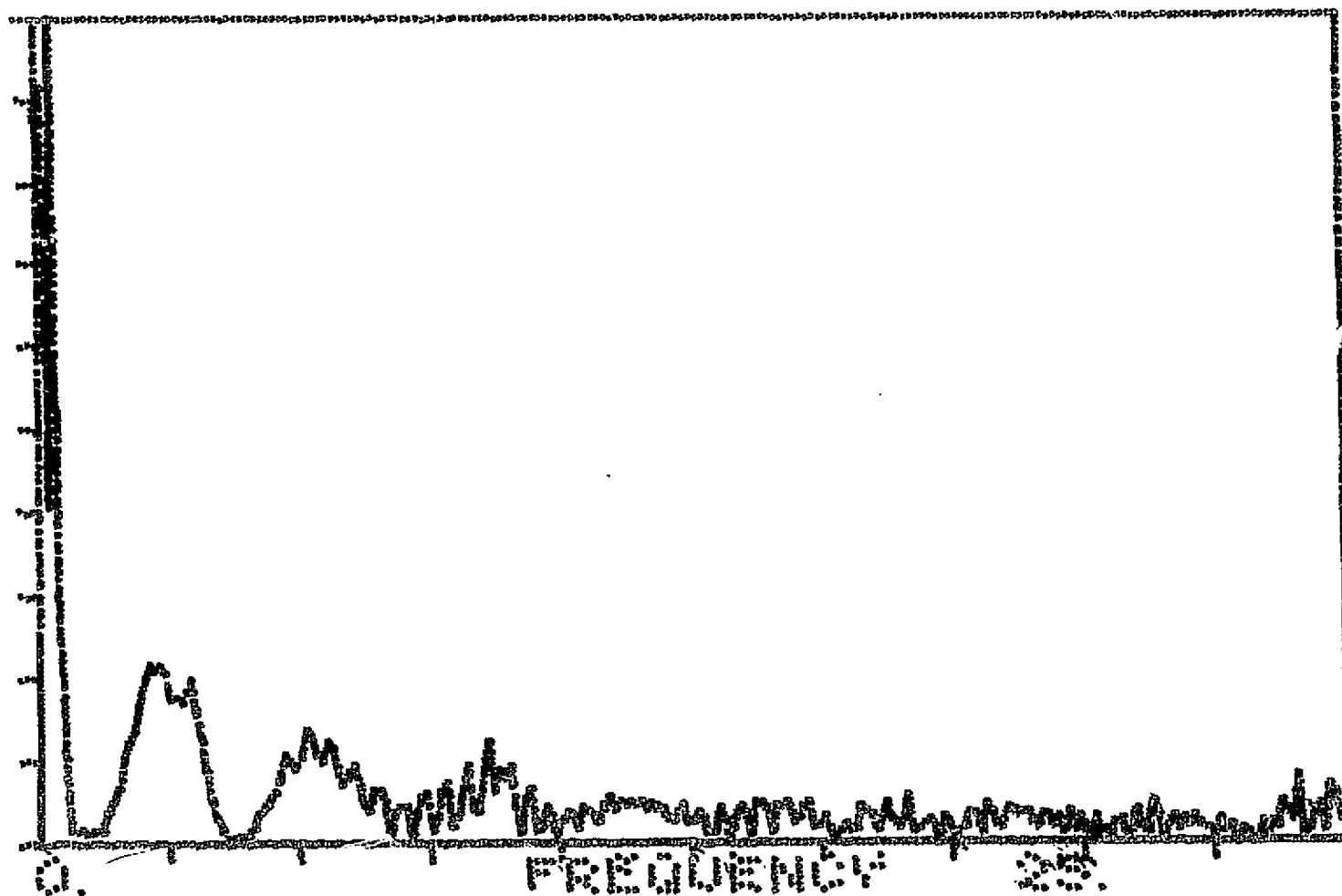


complex

size 250

1.

mean



0.

COMPLEX

SIZE 256

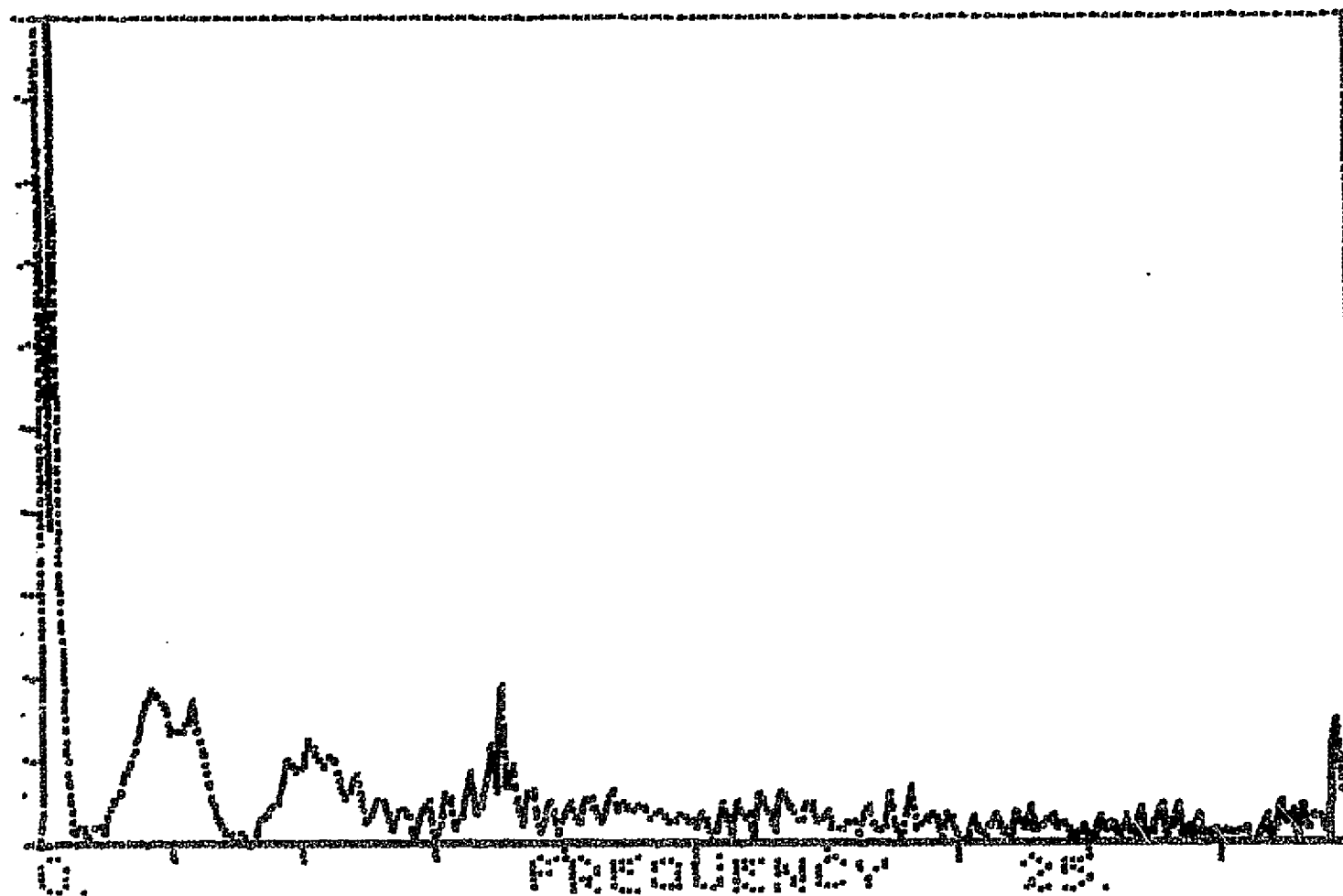
DL14/FL1



1.

mag

2.



COMPLEX

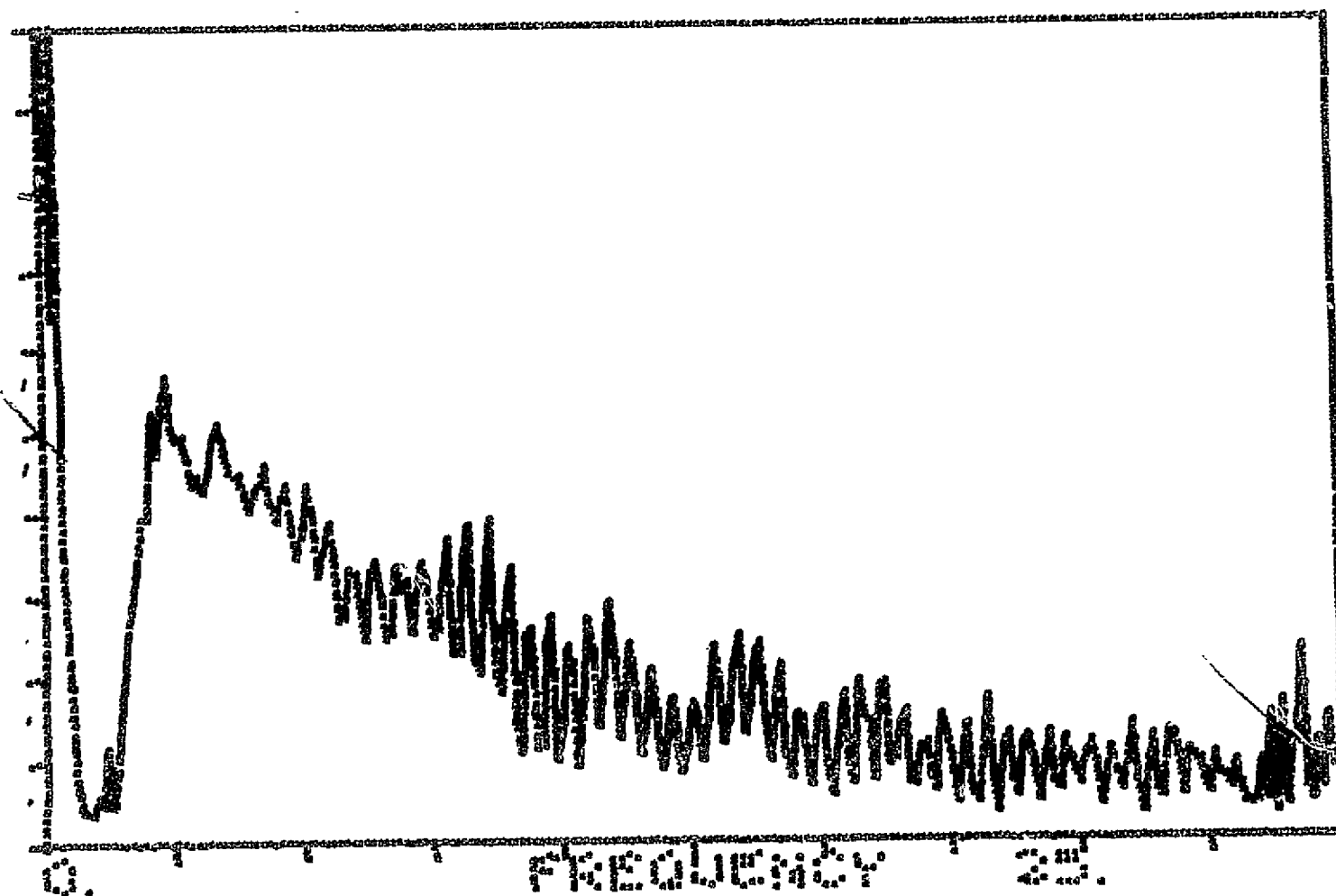
SIZE= 286

DL15/FL1

1.

1964

0.



COMPLEX

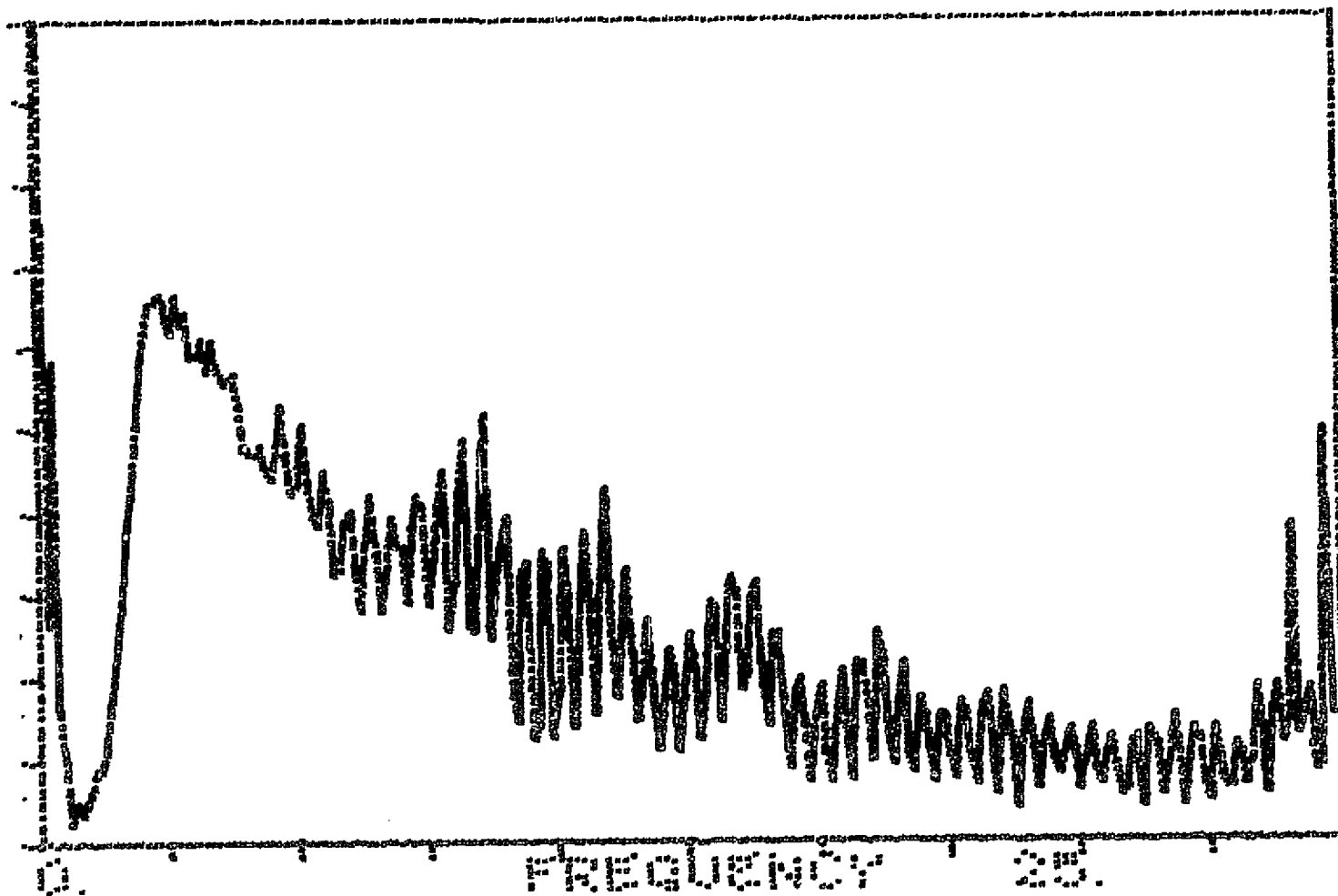
SIZE: 250

DL16/FL1

4.

1964

0.



COMPLEX

81220 250

DL17/FL1

VOLUME II

RUN 13 TEST DATA

Y-AXIS, 9000 POUND/ACTUATOR TEST LEVEL,  
ACTUATORS 180° OUT OF PHASE



1 HEADING: TRAIN TRACK TRANSFER 9000 LB TEST 3/19/75

SWEEP PARAMETERS:

2 MODE 1=LOG, 0=LIN: 1.  
 3 TYPE 1=UNI-DIRECTIONAL, 0=BI-DIRECTIONAL: 1.  
 4 START, END FREQ, HZ: .5 50.  
 FREQ RANGE -- OCTAVES, DECADES: 6.644 2.  
 5 SPECIFICATION 1=RATE, 0=DURATION: 1.  
 6 UNITS 1=OCT/MIN, 0=DEC/MIN: 1.  
 7 RATE, OCT/MIN: 2.  
 SWEEP DURATION -- MIN, SEC: 3. 19.

TEST LENGTH:

8 SPECIFICATION 1=TIME, 0=SWEEP CYCLES: 0.  
 9 CYCLES: 1.  
 TEST TIME -- HRS, MIN, SEC: 0. 3. 19.

START-UP AND SHUT-DOWN:

10 START-UP TIME, SEC: 120.  
 11 SHUT-DOWN TIME, SEC: .5

VIBRATION LIMITS (P-P):

12 DISPLACEMENT, IN: 5000.  
 13 VELOCITY, IN/SEC: 9999.  
 14 ACCELERATION, G: 450.

REFERENCE CONTROL SPECTRUM:

|                                    |    |     |     |    |
|------------------------------------|----|-----|-----|----|
| 15 TYPE, VALUE, FREQ, ABORT LIMIT: | 2. | 40. | 0.5 | 7. |
| 16 TYPE, VALUE, FREQ, ABORT LIMIT: | 3. | 60. | 1.3 | 4. |
| 17 TYPE, VALUE, FREQ, ABORT LIMIT: | 2. | 60. | 50. | 4. |
| 18 TEST LEVEL (DB BELOW REF):      | 0. |     |     |    |

ACCELERATION SIGNALS:

19 NR OF SIGNALS: 2.  
 CHANNEL NRS: 1. 2.  
 20 1=PEAK, 0=RMS: 0.  
 21 SENSITIVITY, MV/G: 20.  
 22 STRATEGY 1=MAX, 0=AVG: 1.

LIMIT SIGNALS:

23 NR OF SIGNALS: 0.

ABORT LINES:

24 NR OF LINES: 0.

ALARM LINES:

25 NR OF LINES: 0.  
 26 1=DUAL-CHANNEL A/D, 0=ACE: 1.  
 27 COMPRESSION SPEED 2=HIGH, 1=NORMAL, 0=LOW: 1.

## POST-TEST DOCUMENTATION

TRAIN TRACK TRANSFER 9000 LB TEST 3/19/75

COMPLETION STATUS: ABORTED DURING SWEEP 1 AT 37.95 HZ.  
MAXIMUM DRIVE LIMIT.

TEST DURATION -- HRS, MIN, SEC: 0 3 7

MAX ABS CONTROL ERROR: 2.57 DB AT 29.49 HZ.  
AVG ABS CONTROL ERROR: .61 DB.CONTROL  
CHANNEL FREQ RANGE (HZ)

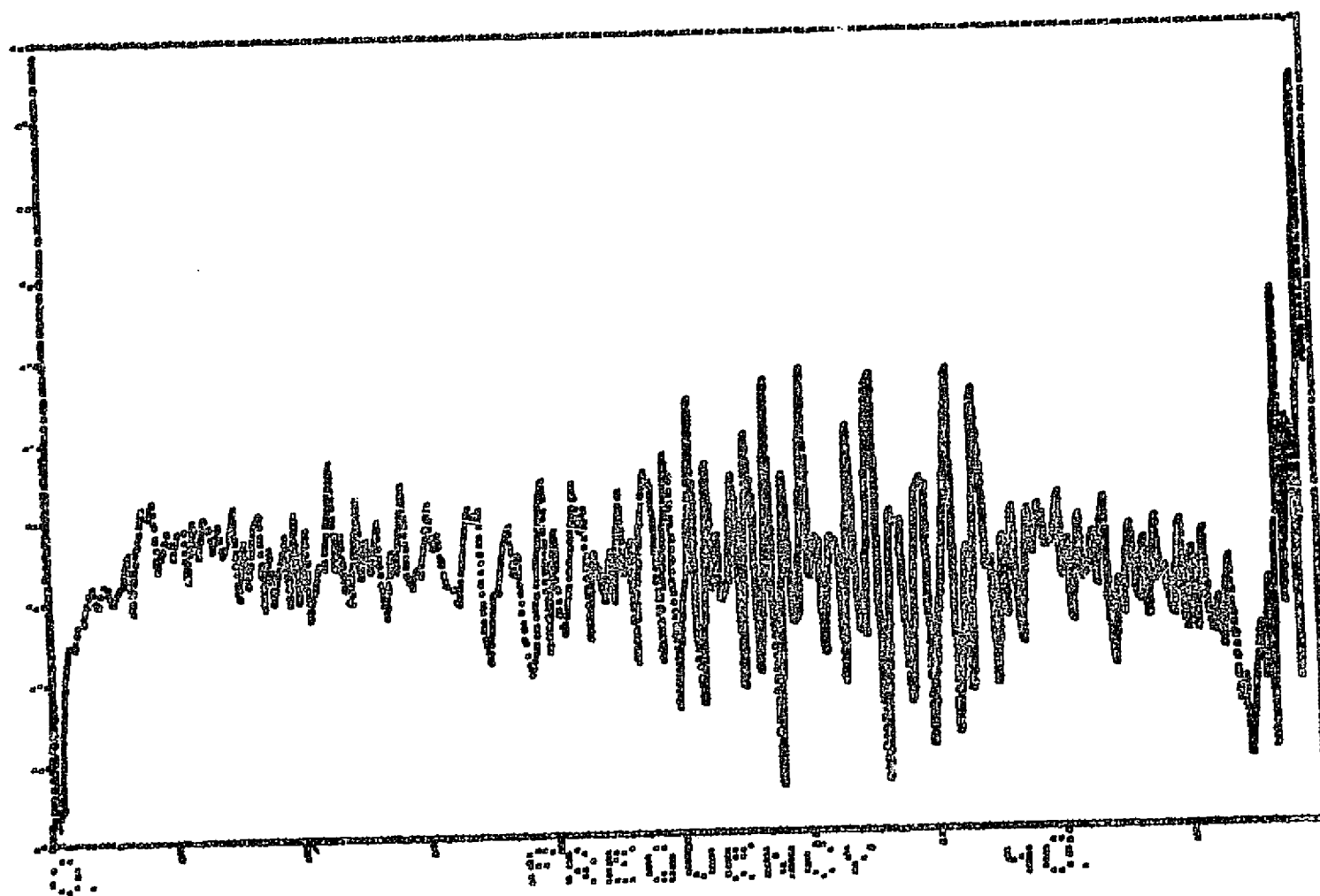
SWEEP :

|   |       |    |       |
|---|-------|----|-------|
| 1 | .5    | -- | 13.52 |
| 2 | 13.52 | -- | 13.57 |
| 1 | 13.67 | -- | 13.82 |
| 2 | 13.82 | -- | 14.29 |
| 1 | 14.29 | -- | 14.47 |
| 2 | 14.47 | -- | 15.31 |
| 1 | 15.31 | -- | 15.43 |
| 2 | 15.43 | -- | 15.61 |
| 1 | 15.61 | -- | 17.05 |
| 2 | 17.05 | -- | 17.08 |
| 1 | 17.08 | -- | 22.16 |
| 2 | 22.16 | -- | 22.23 |
| 1 | 22.23 | -- | 22.68 |
| 2 | 22.68 | -- | 22.72 |
| 1 | 22.72 | -- | 23.66 |
| 2 | 23.66 | -- | 23.73 |
| 1 | 23.73 | -- | 24.22 |
| 2 | 24.22 | -- | 24.26 |
| 1 | 24.26 | -- | 27.69 |
| 2 | 27.69 | -- | 27.72 |
| 1 | 27.72 | -- | 37.95 |

2.

1968

0.



COMPLEX

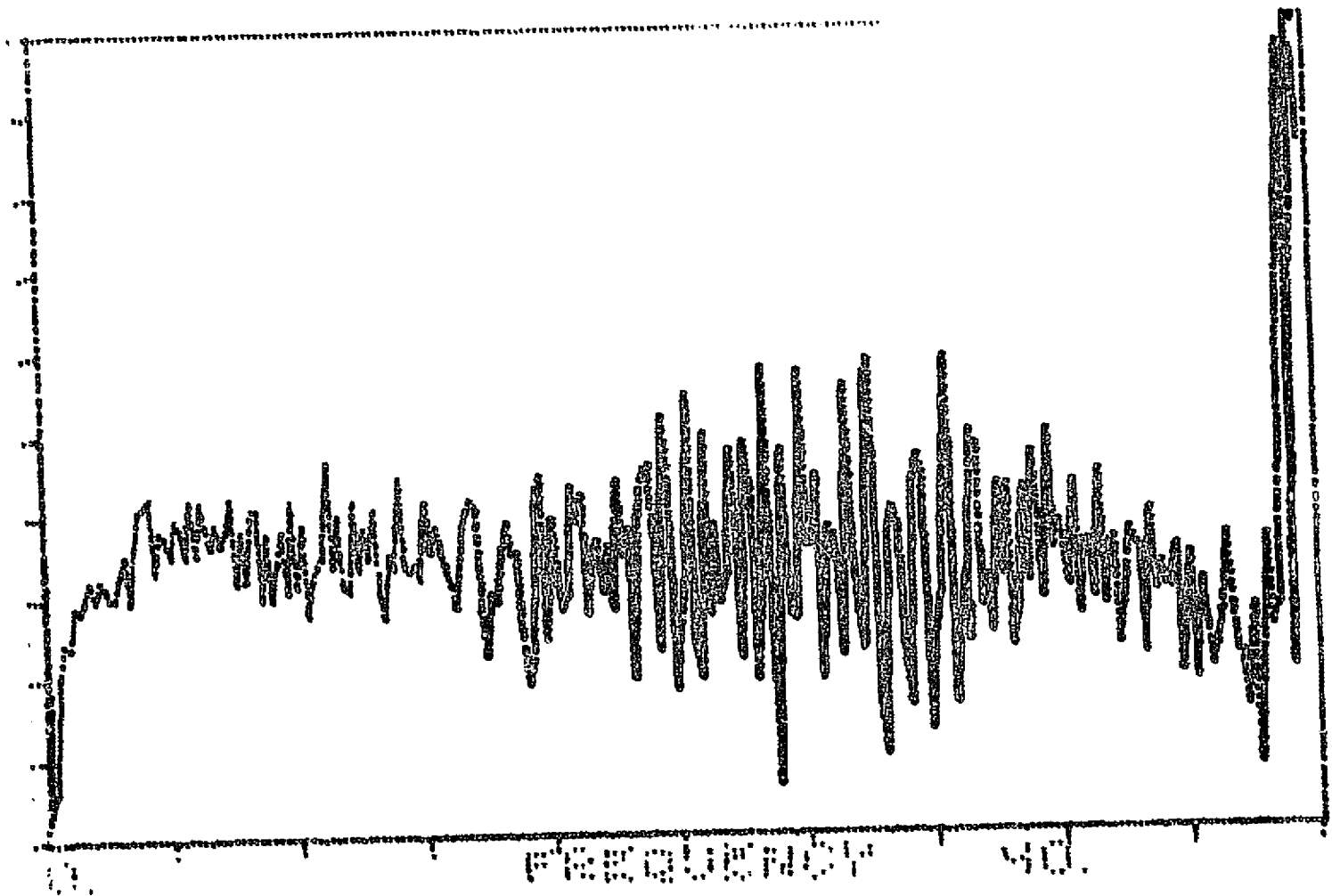
SIZE = 32768

FL1/DRIVE

3.

HAOH

0.



COMPLEN

0128- 230

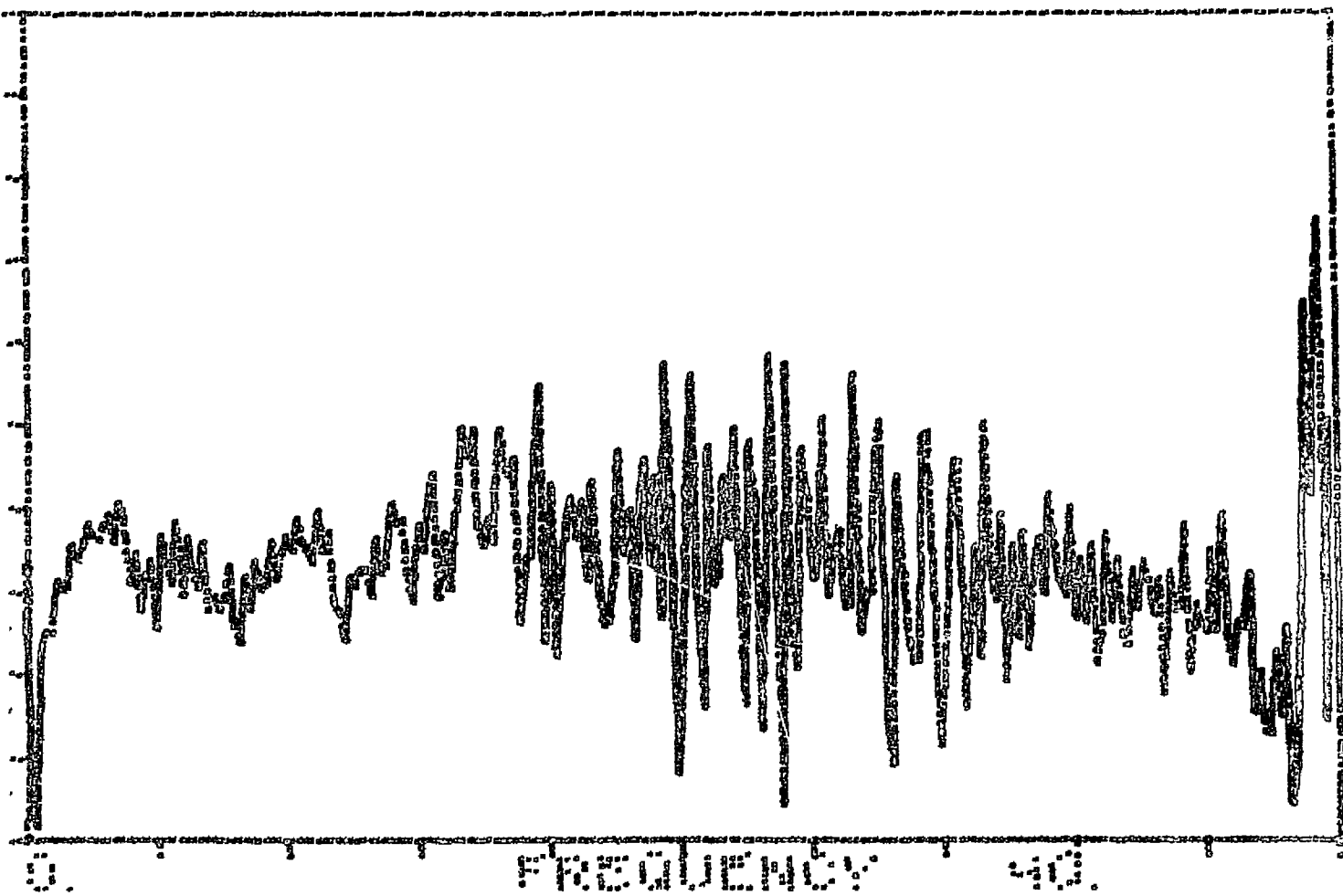
FL1/DRIVE



2

1908

2



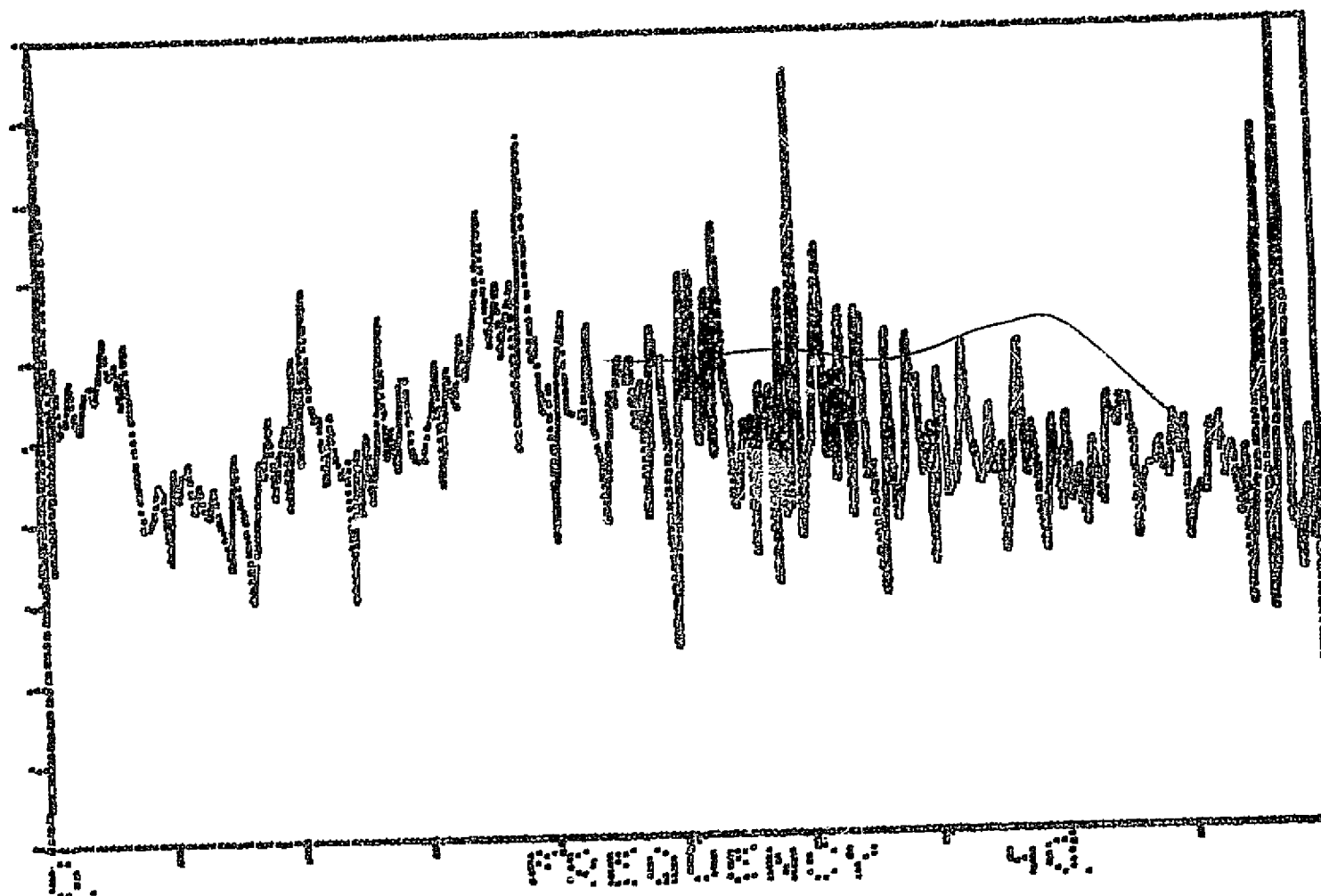
COMPLEX

SIZE: 250

FL2/DRIVE

2.

naok



COMPLEX

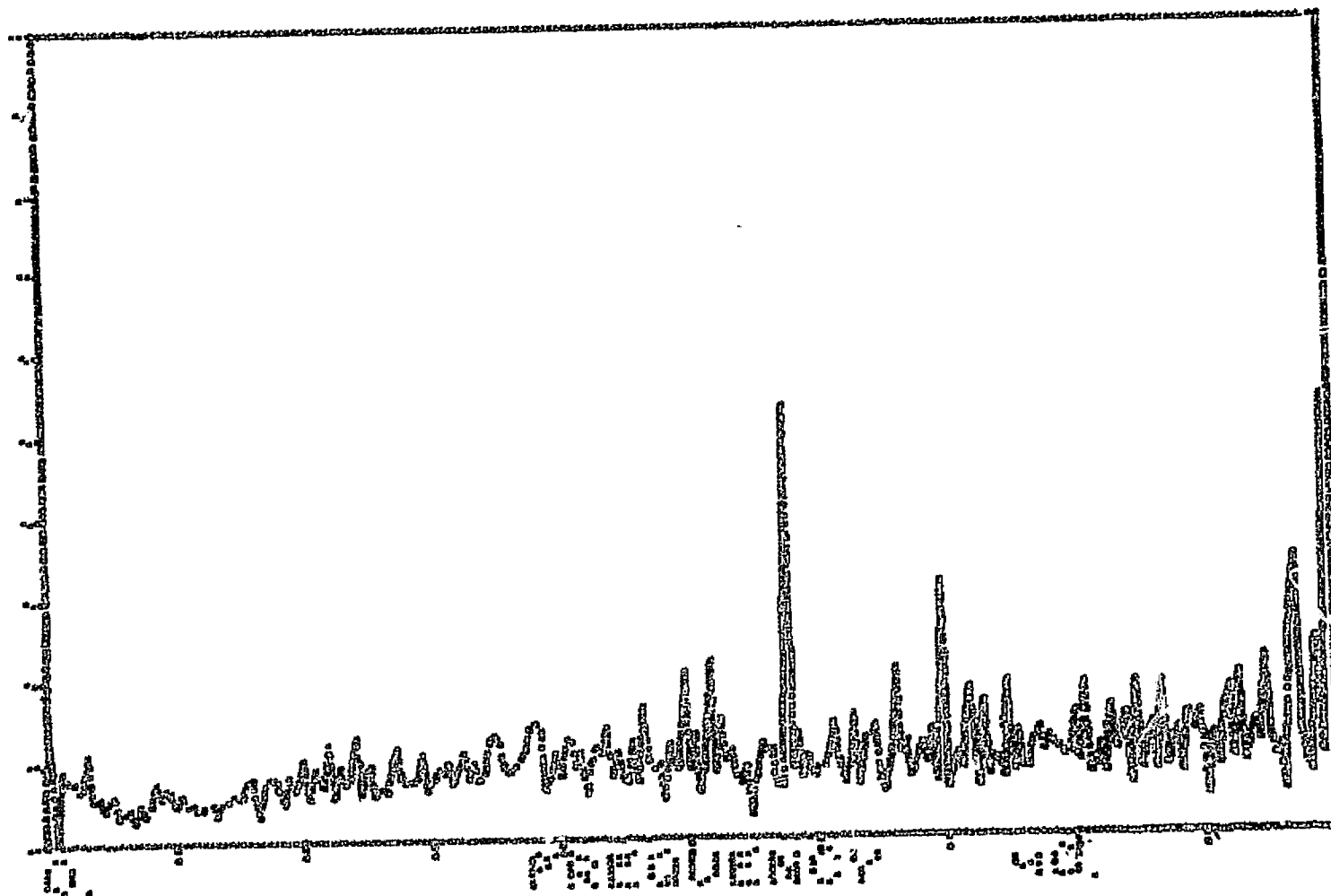
SIZE: 256

FL2/FL1

2.

19019

2.



COMPLEX

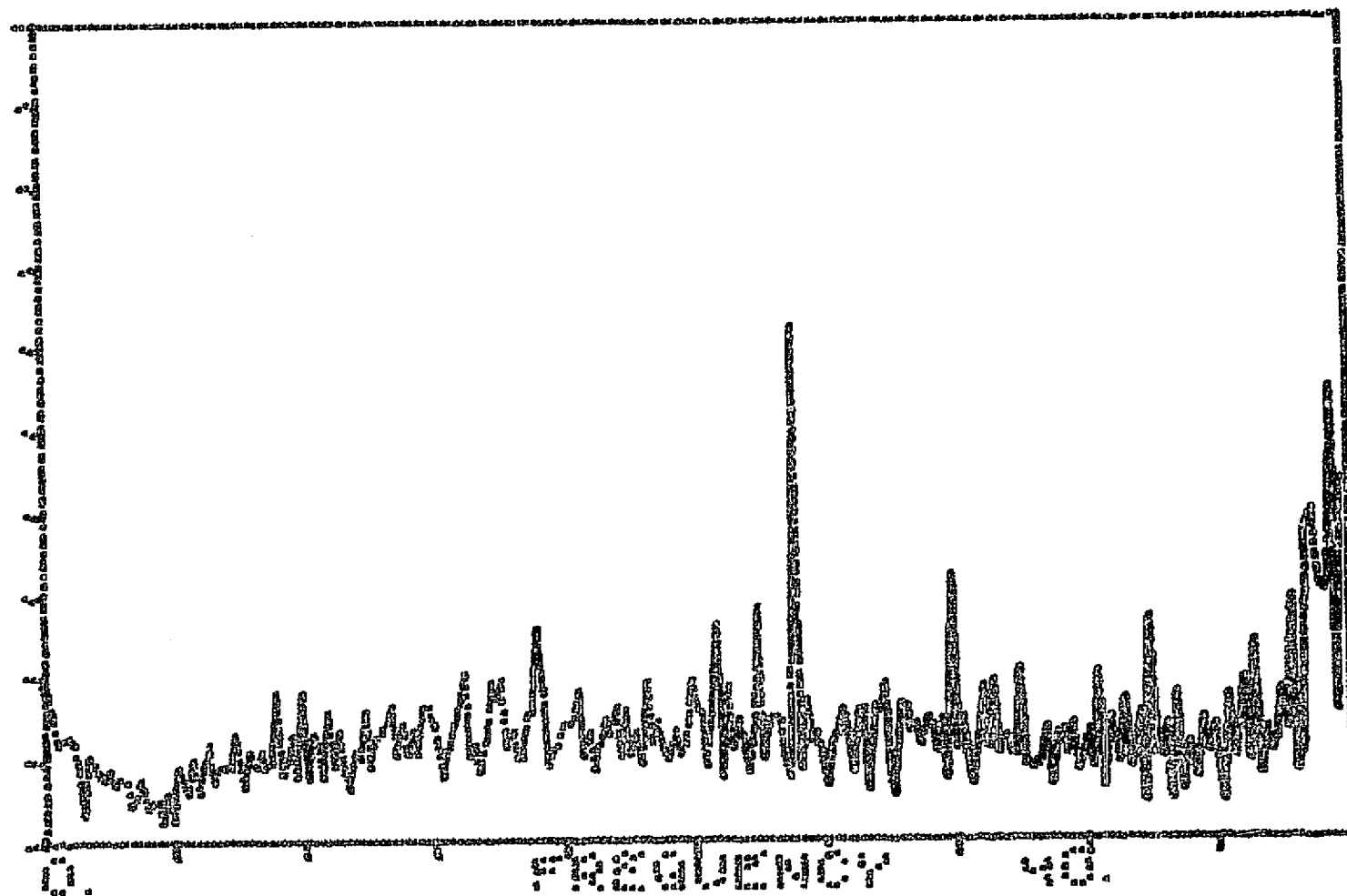
0135-255

FV2/FL1

0.0

0.0

0.0



COUNTS

TIME

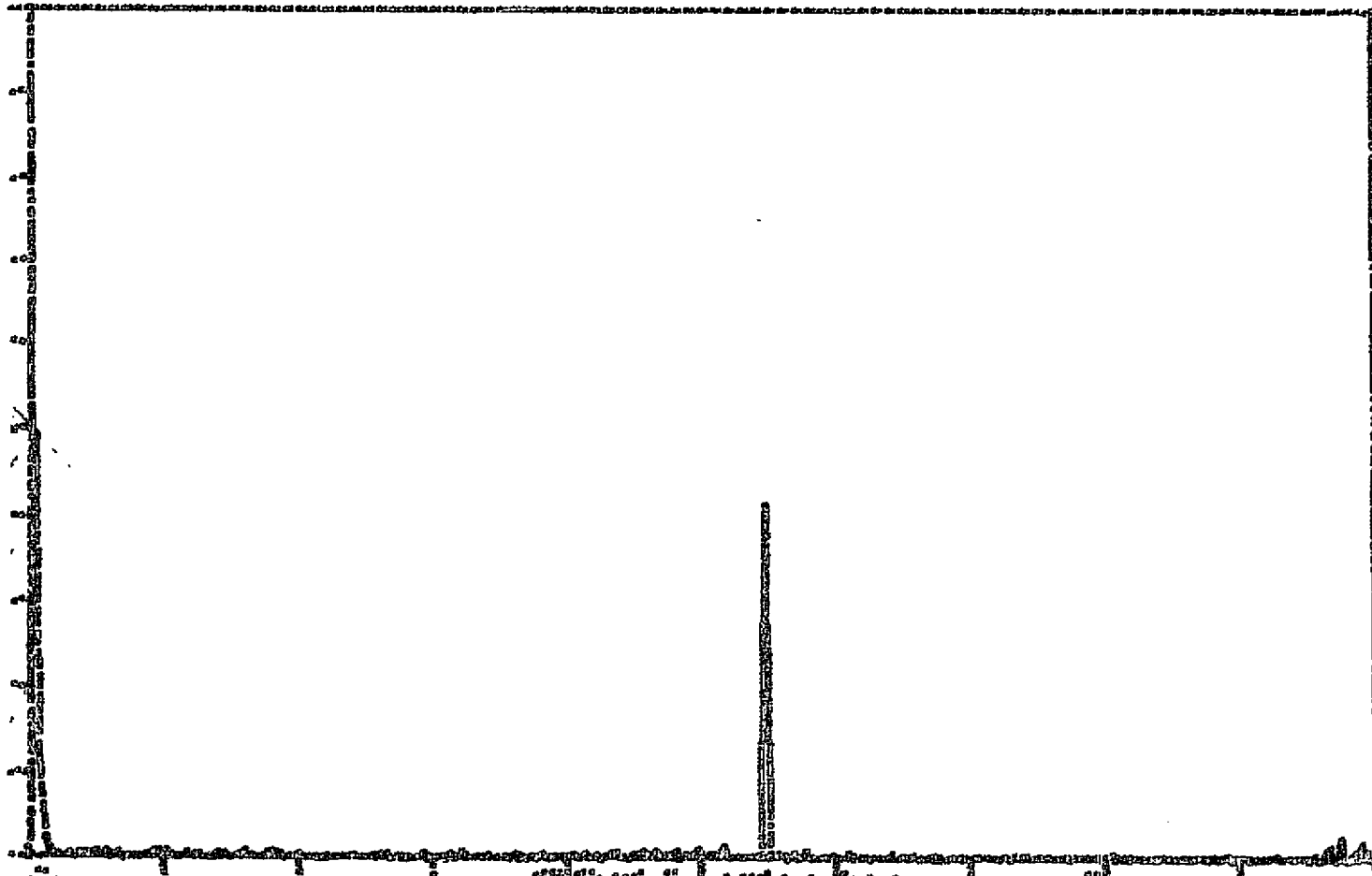
FV3/FL1



0000

0000

0000

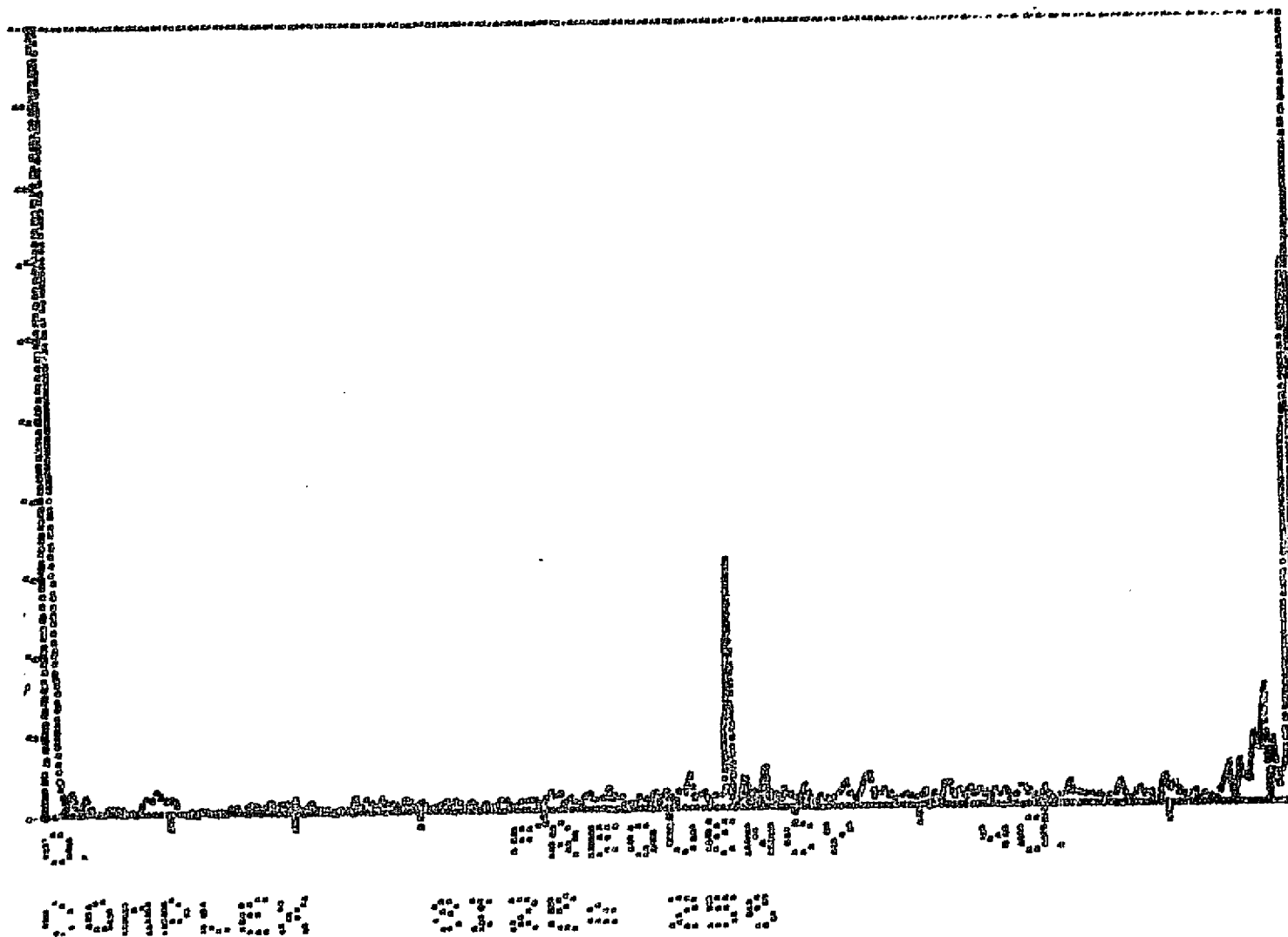


0000 0000 0000 0000

0000 0000 0000

1100

0.

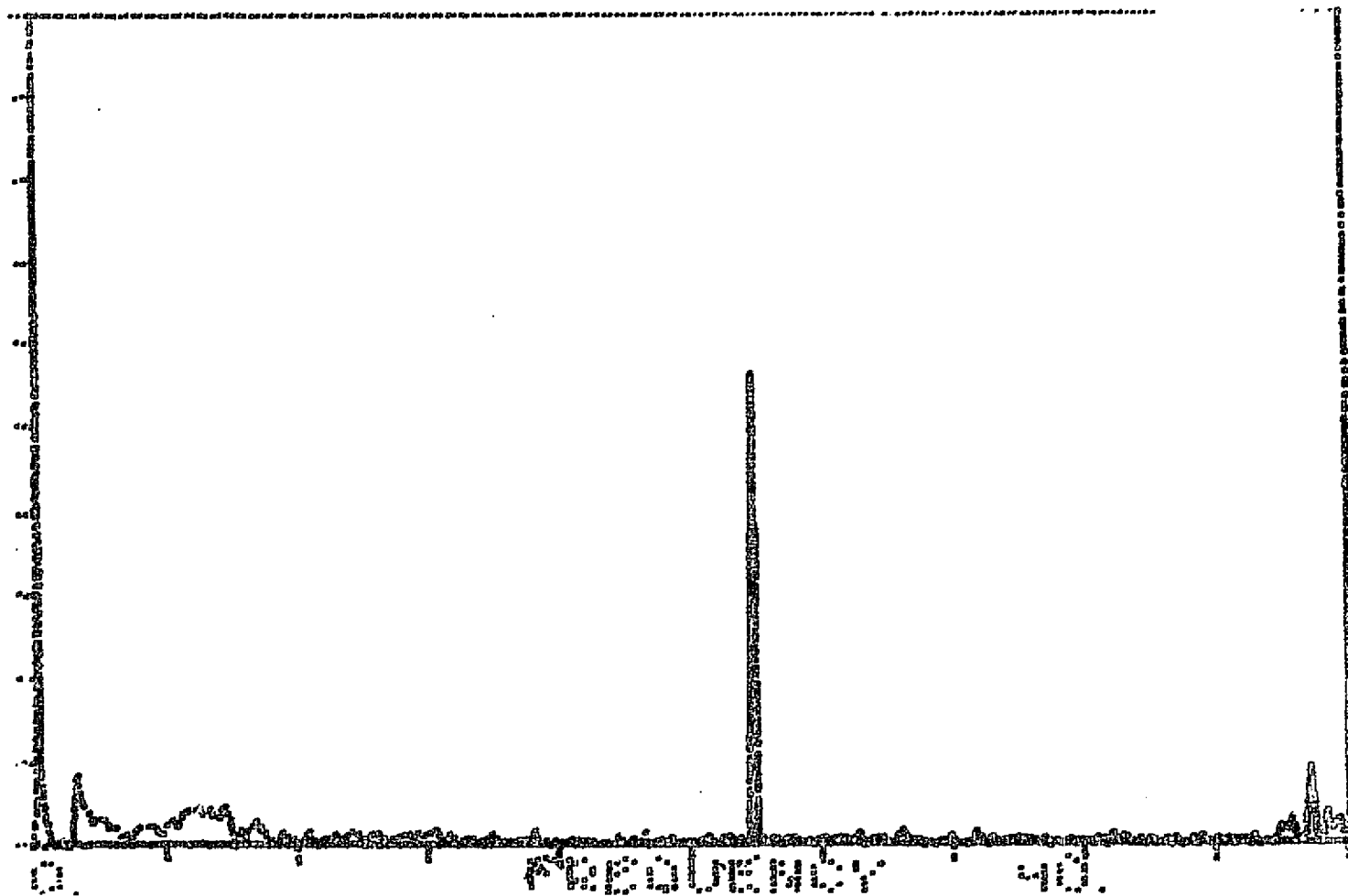


DV2/FL1

1.

1100H

0.



COMPLEX

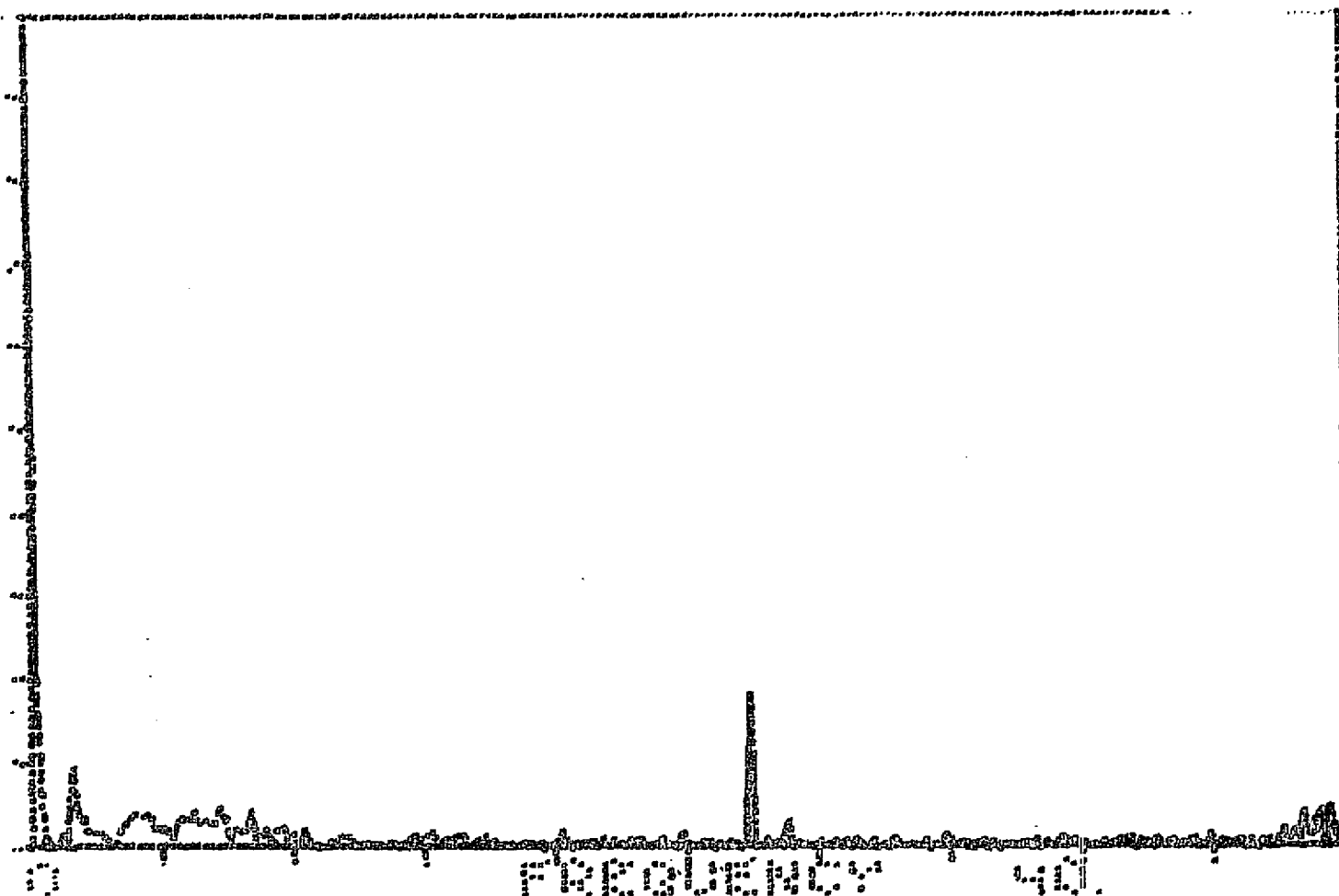
SIZE = 250

DV3/FL1

1.

1999

0.



COMPLEX

4.11 256

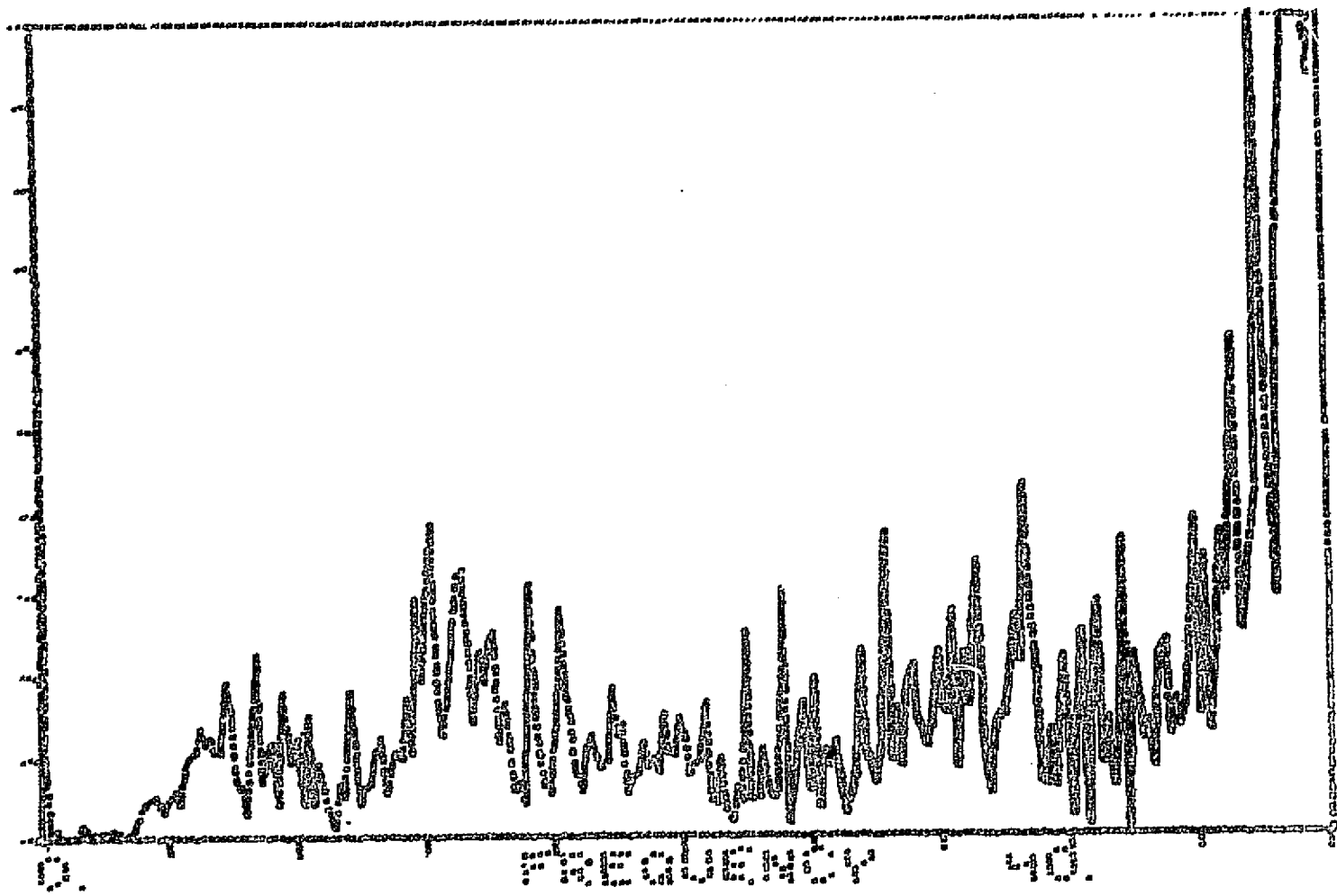
DV4/FL1



1.

1964

0.



COMPLEX

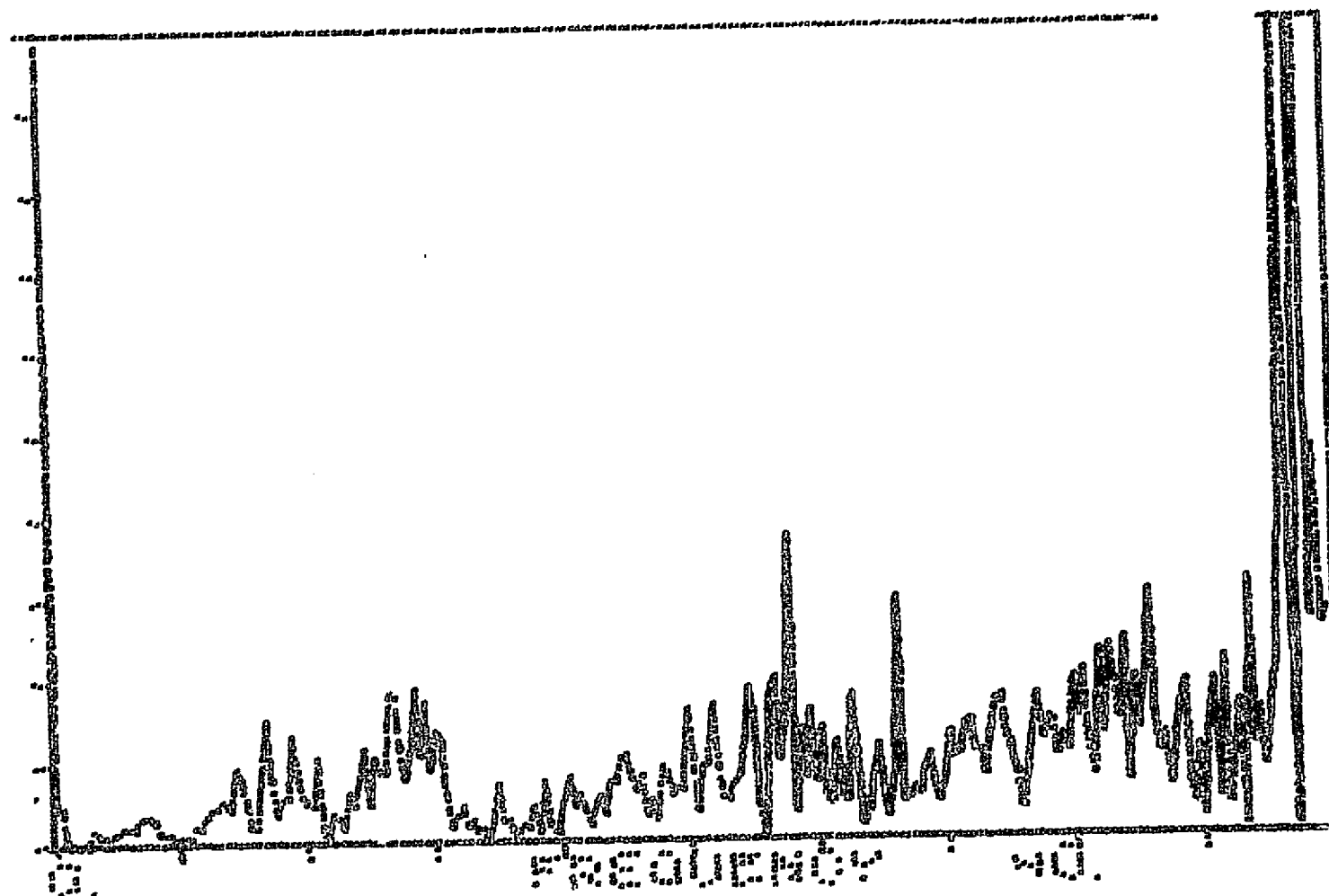
0.25 0.5

AV1/FL1

1.

1959

0.



COMPLEX

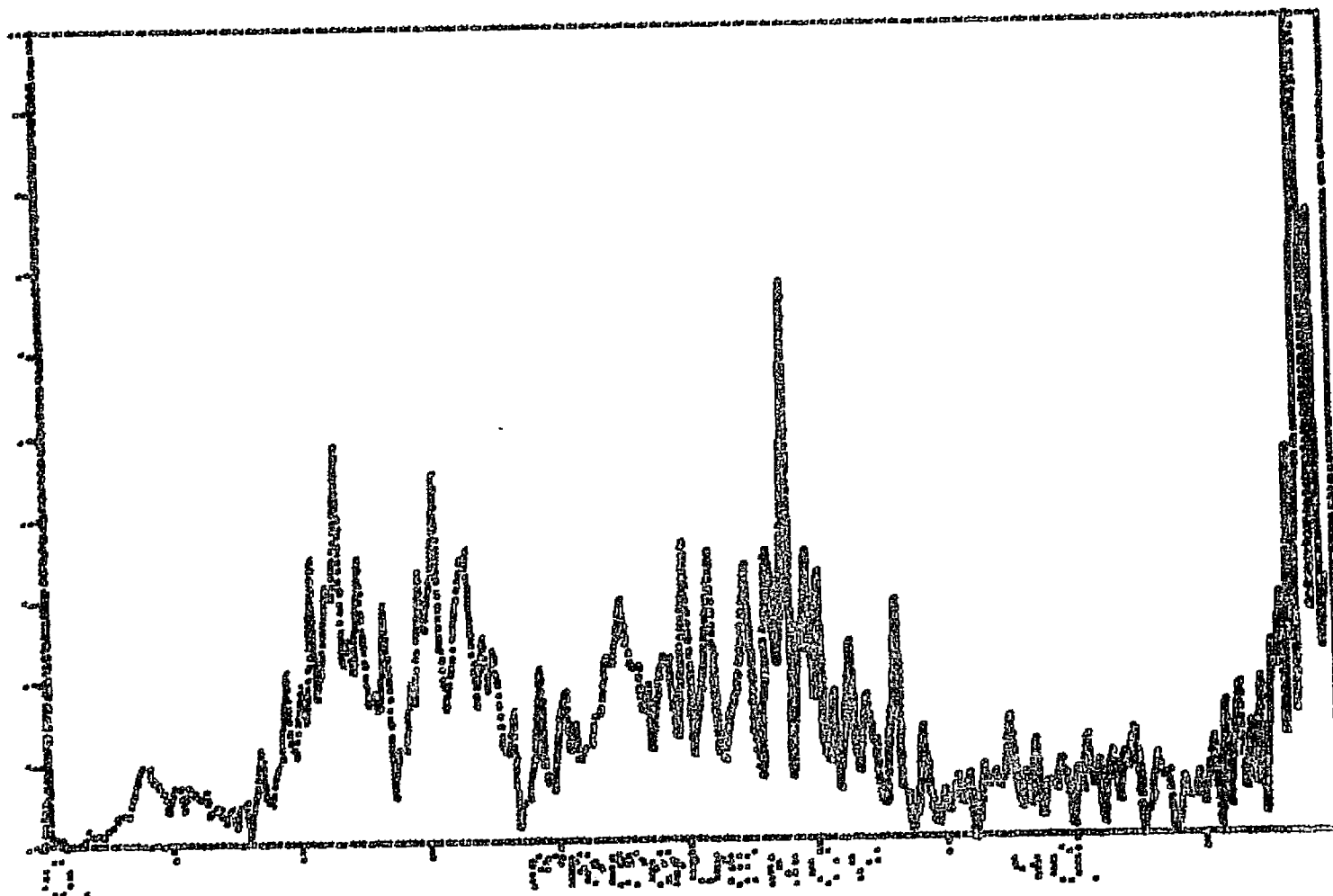
01234 255

AV2/FL1

4.

mag

0.



COMPLEX

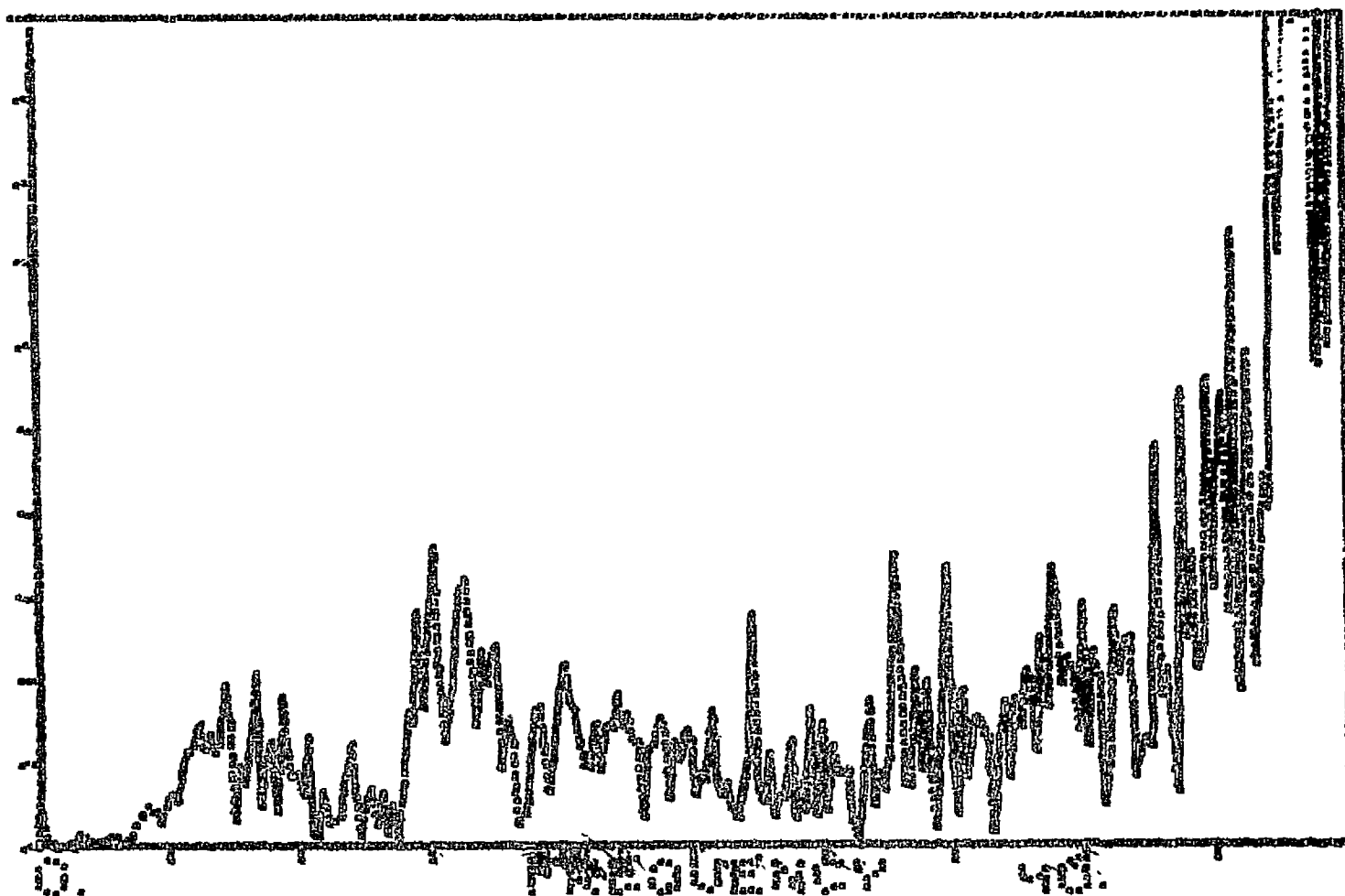
SIZE 256

AV3/FL1

4.

1964

0.



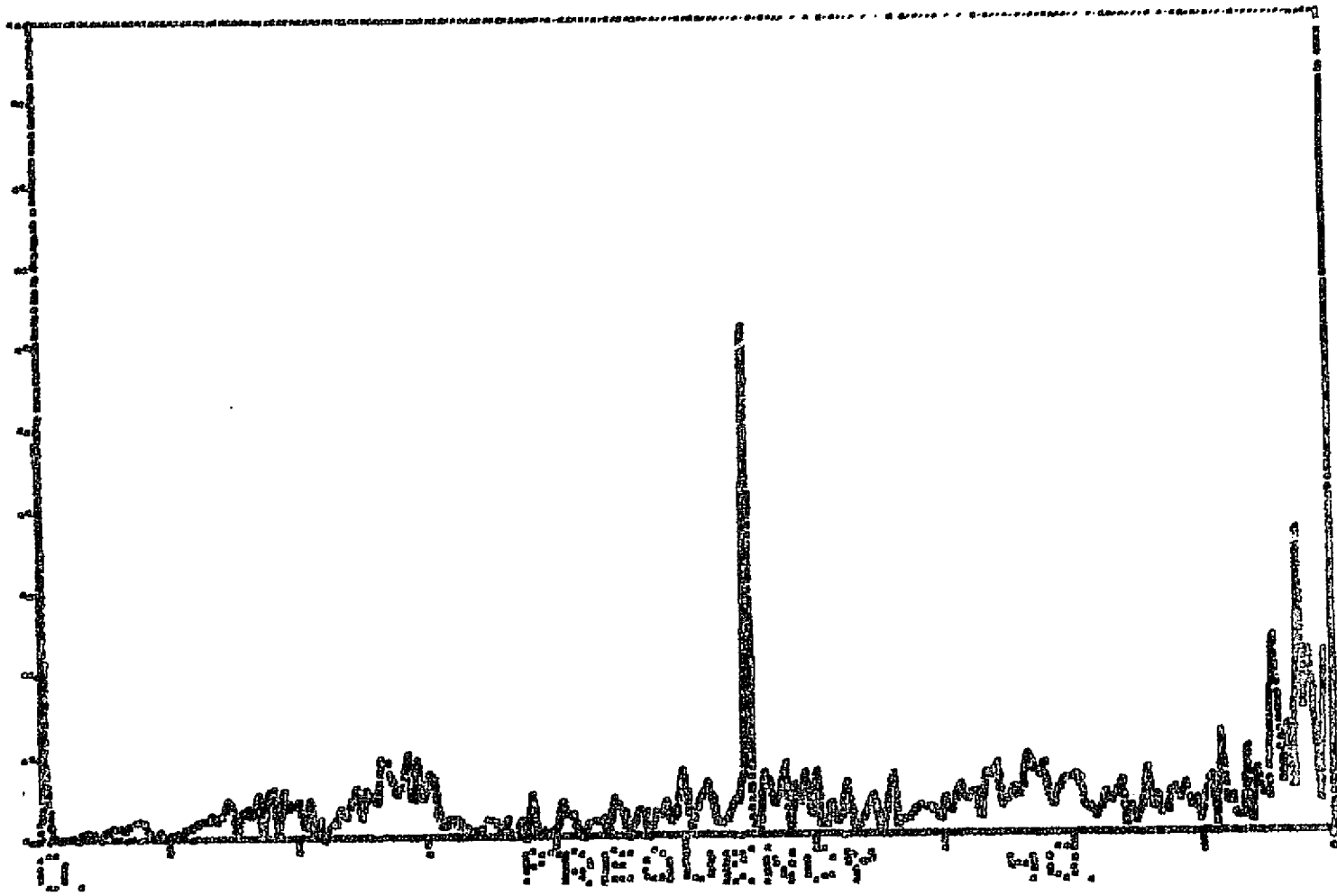
0.01

0.01

AV4/FL1



179014



COMPLEX

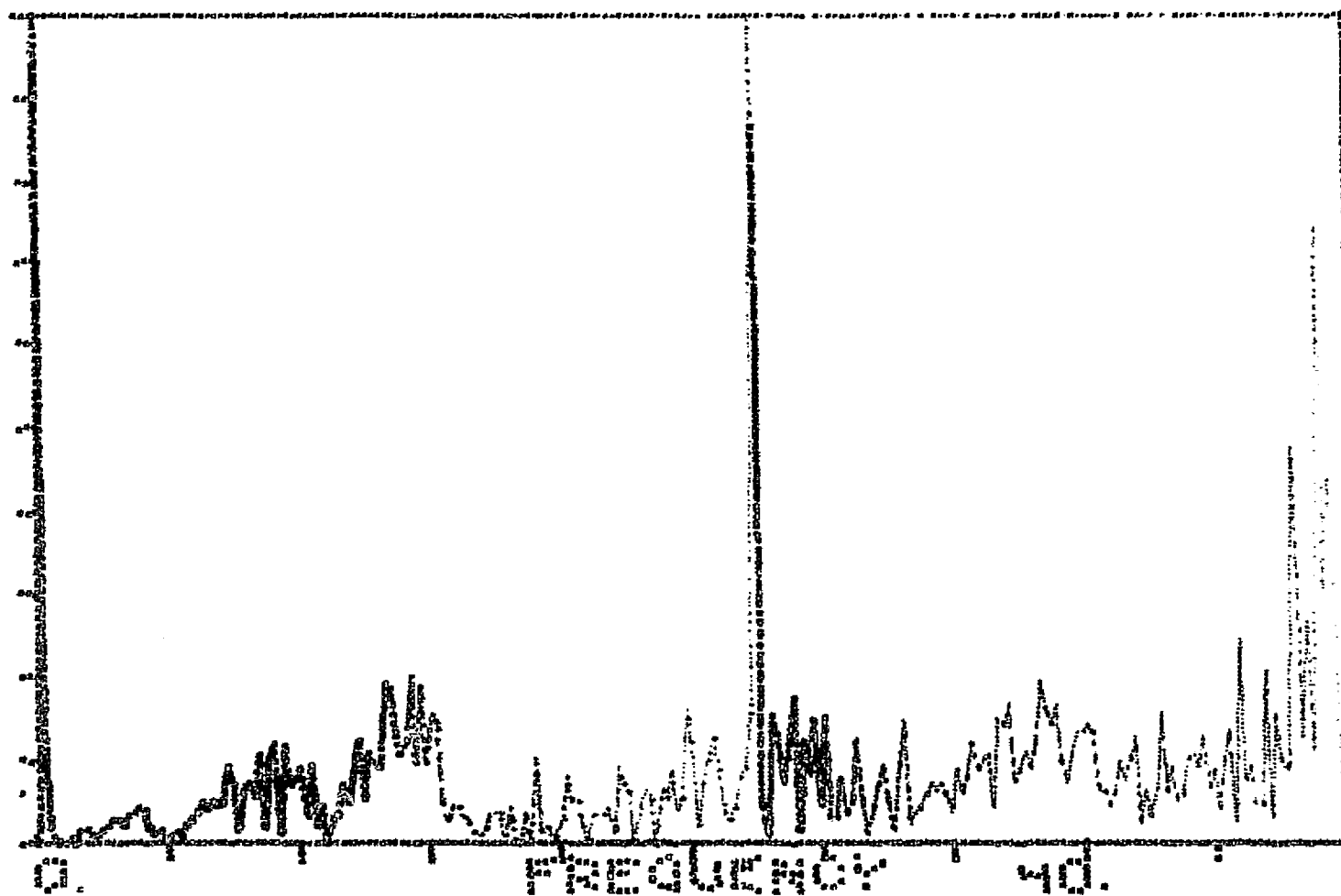
8122: 250

AV5/FL1

4.

mag

0.

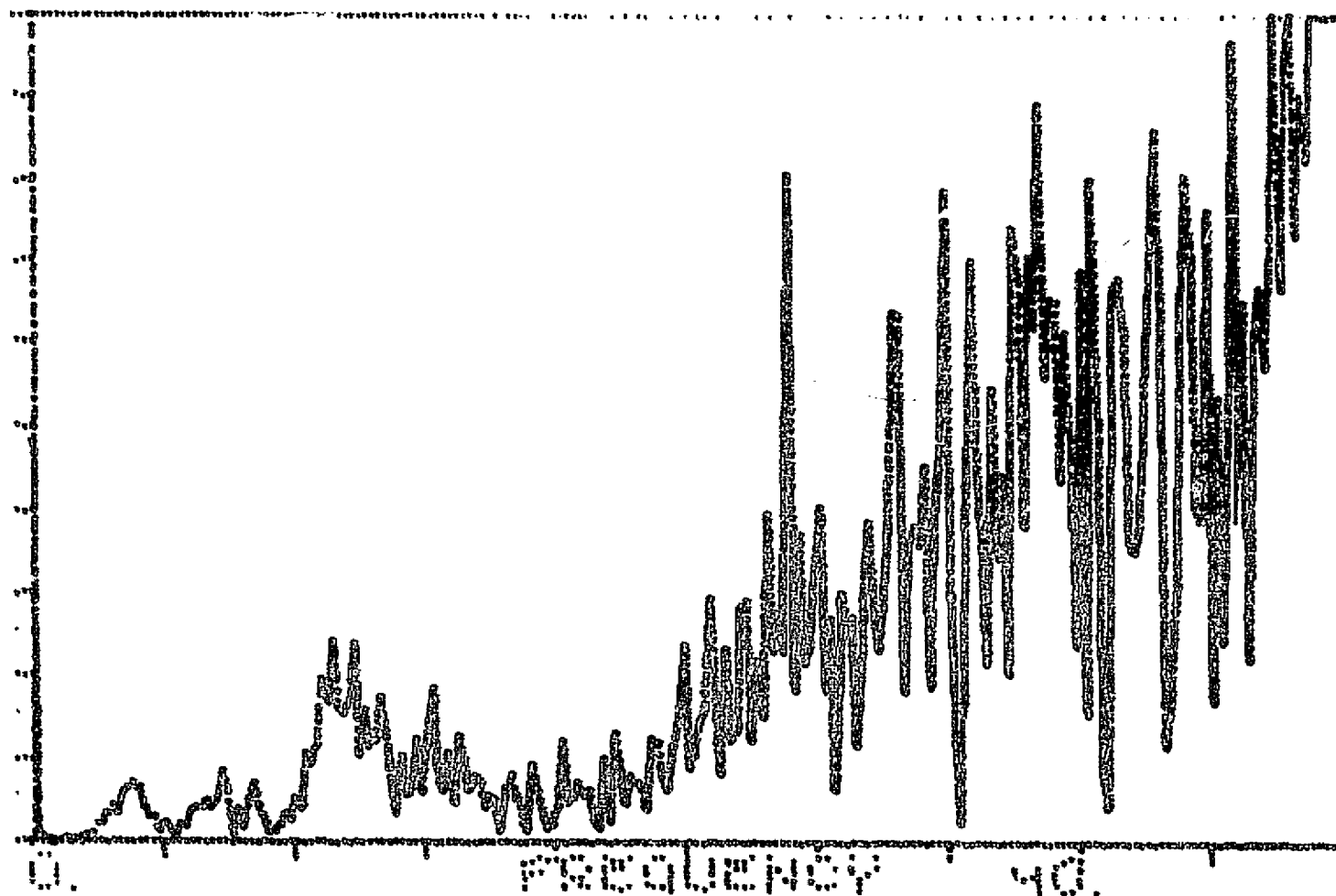


COMPLEX

SIZE 256

AV5/FL1





COMPLEX

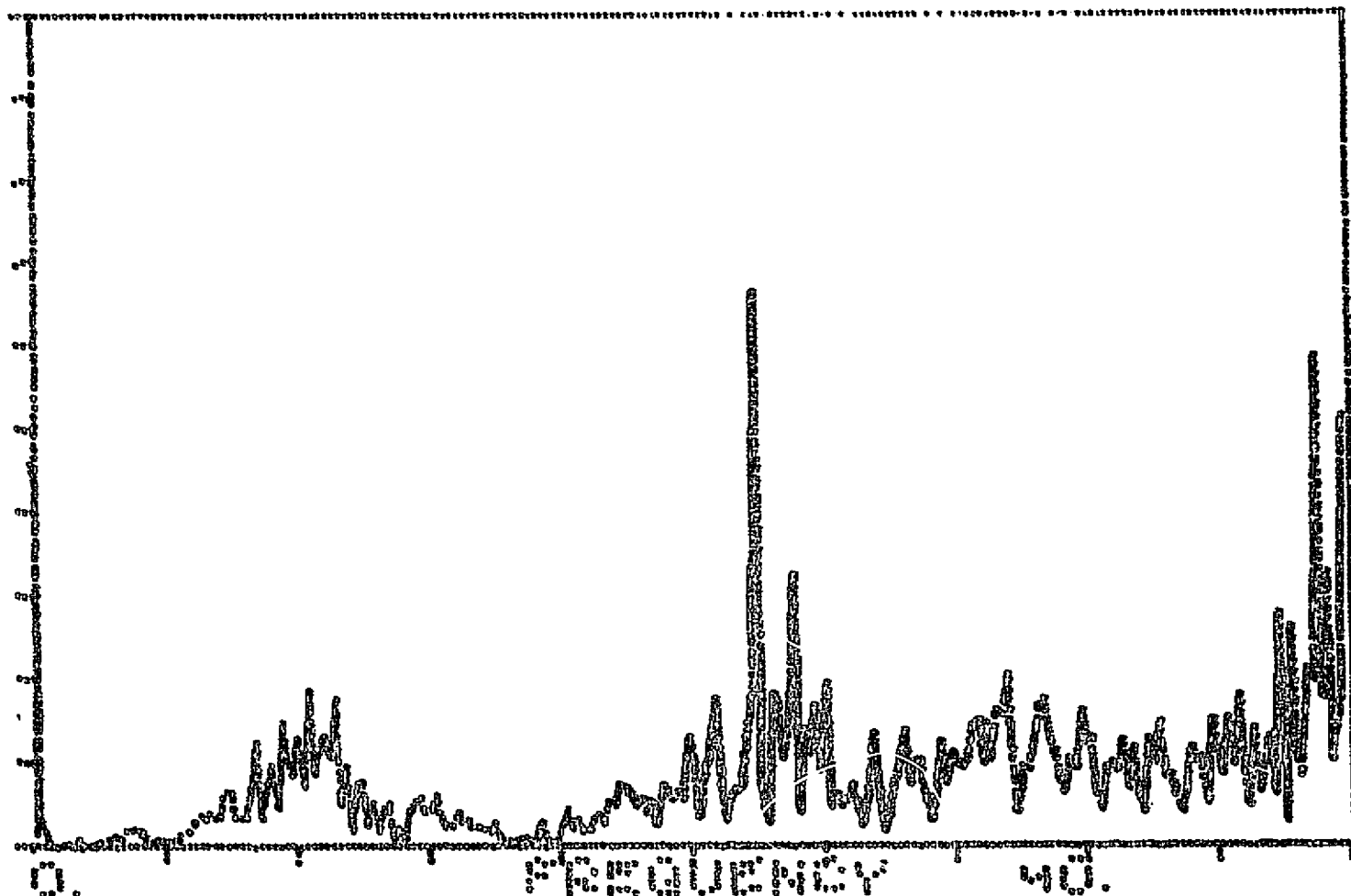
8138 250

AL1/FL1

2

FORM

0



Complex

0.000 0.000 0.000

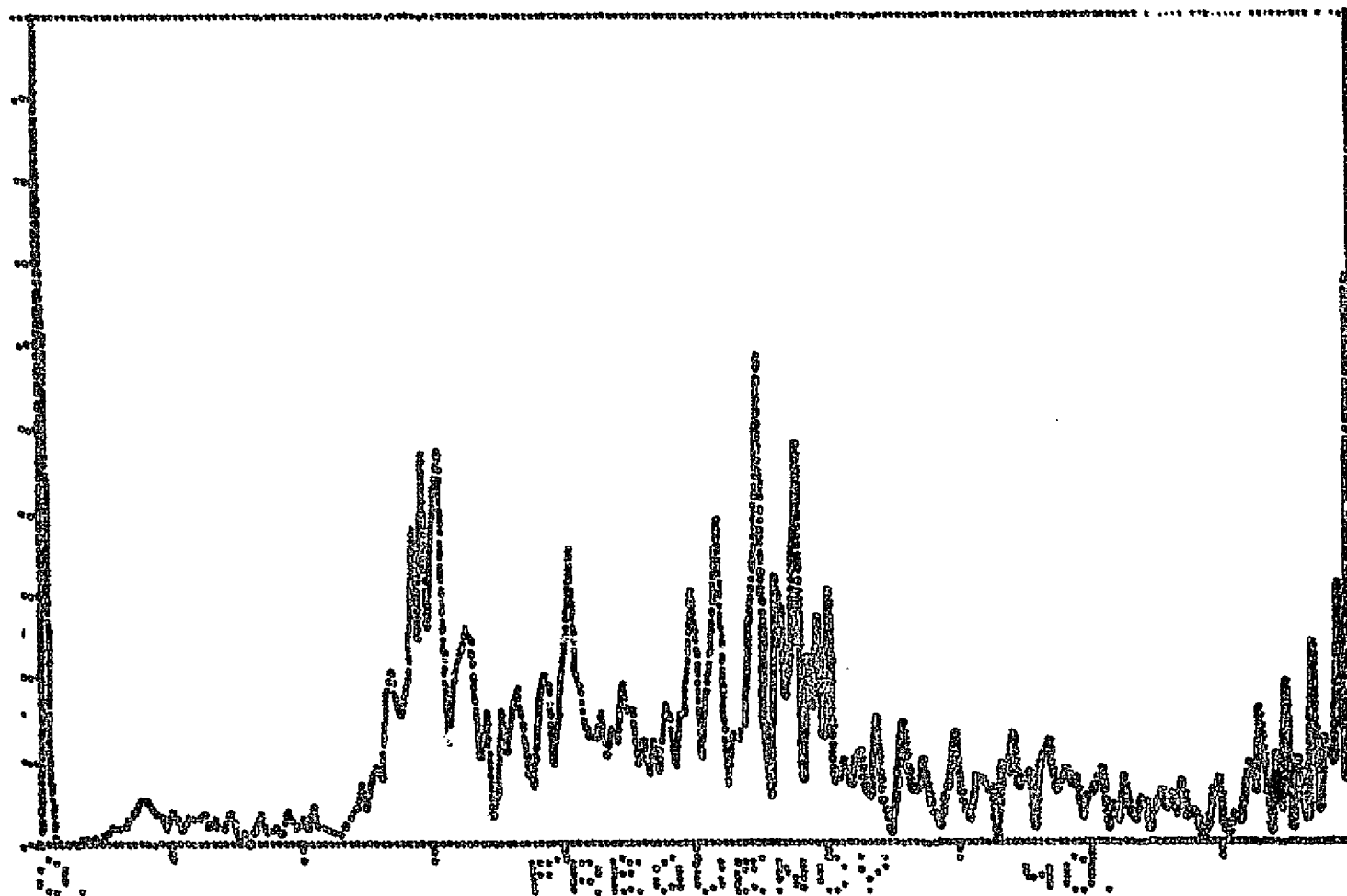
AL2/FL1



3.

174618

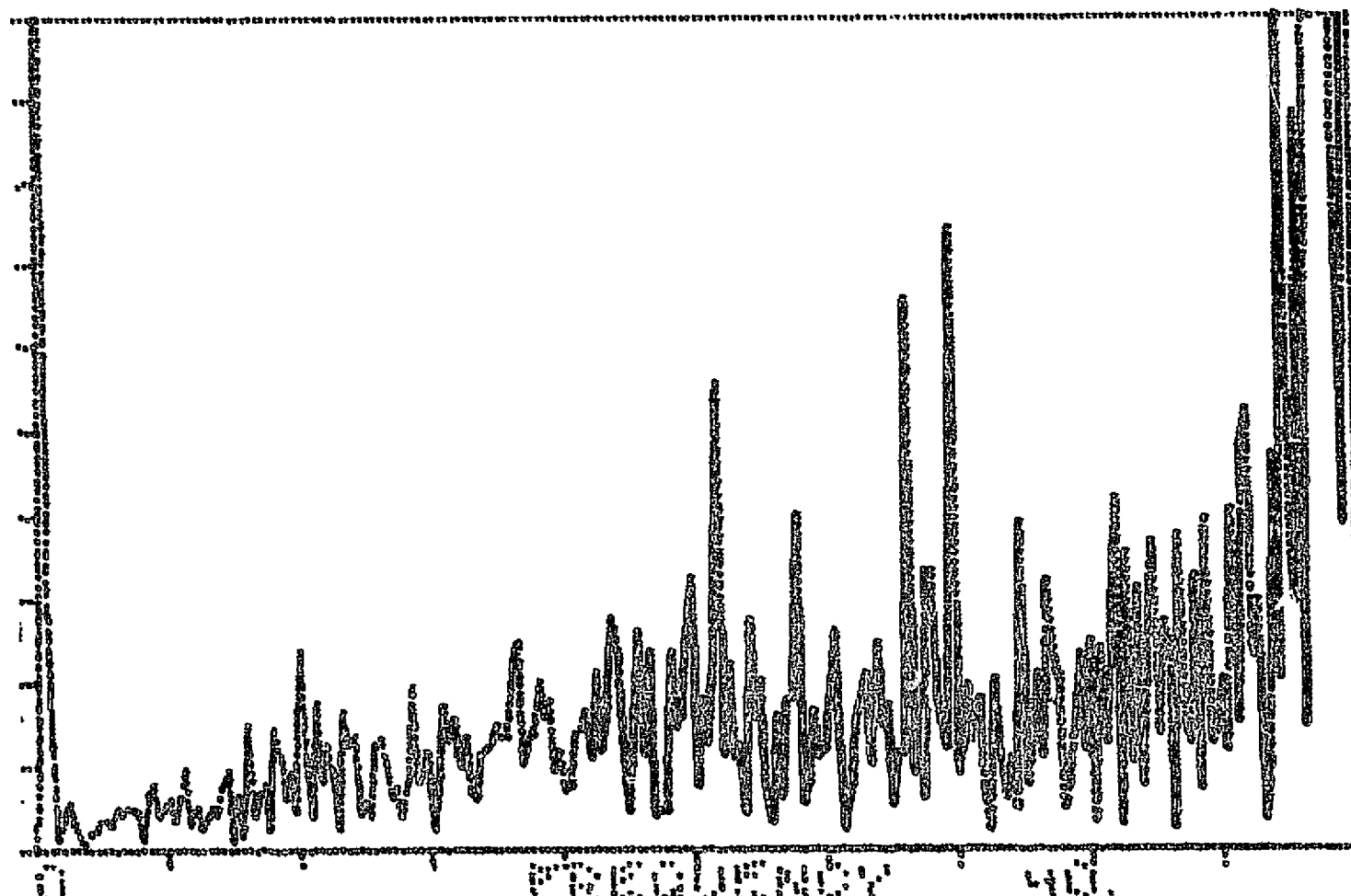
0.



COMPLEX

0128- 250

AL3/FL1

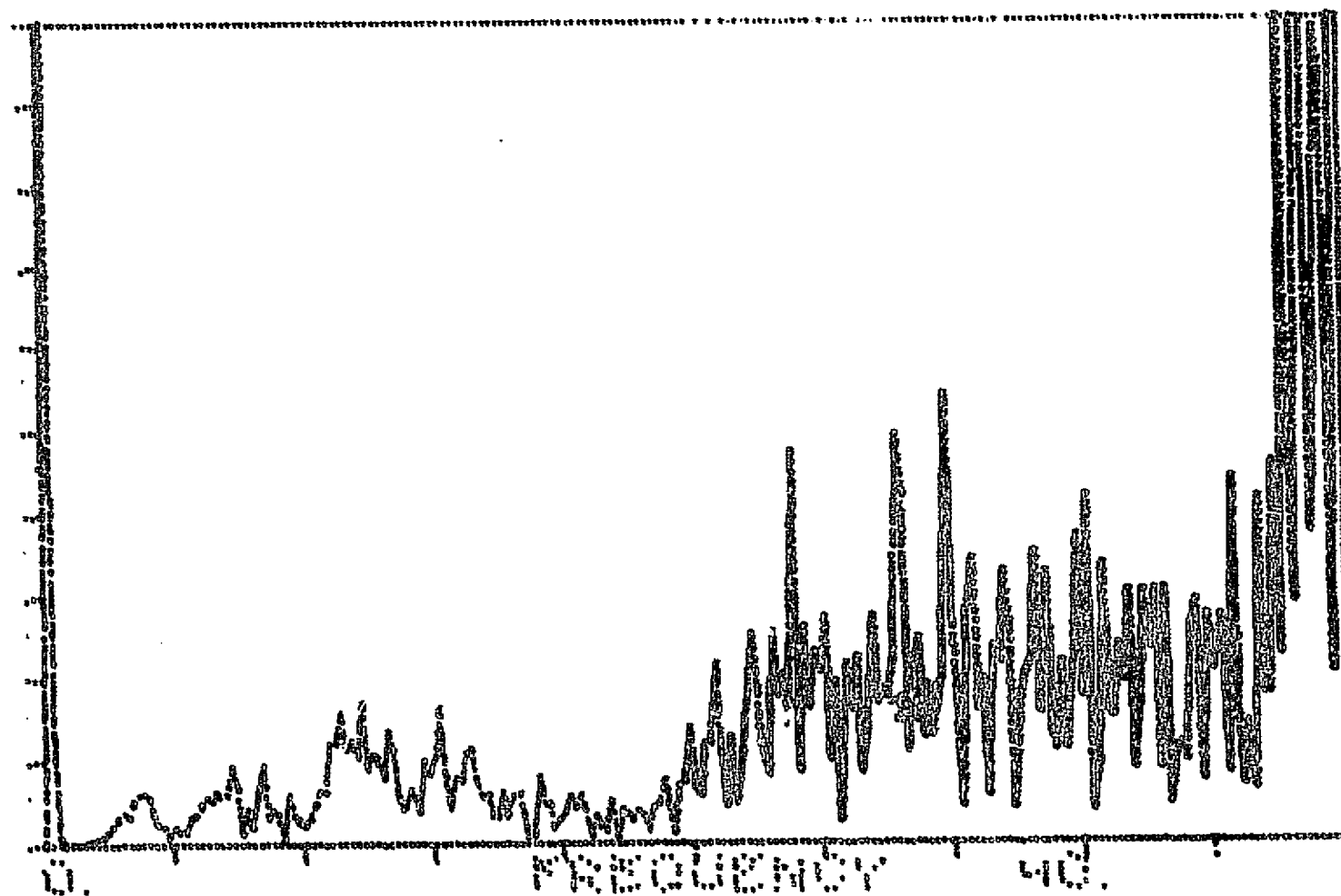


COMPLEX SIZE 256

AL6/FL1

2.

MA6H



COMPLEX

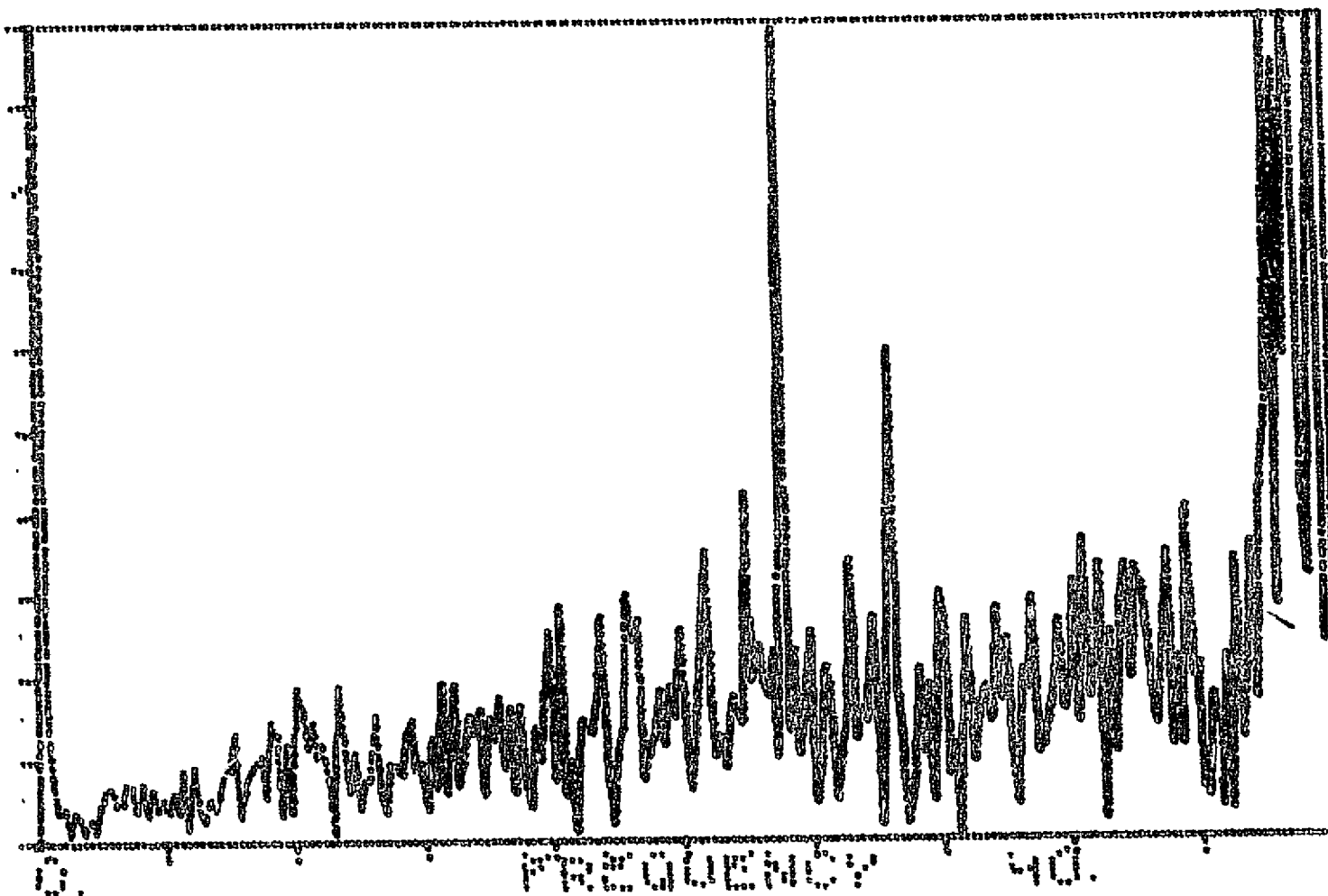
312E 256

AL7/FL1

10.

MAGN

0.



COMPLEX

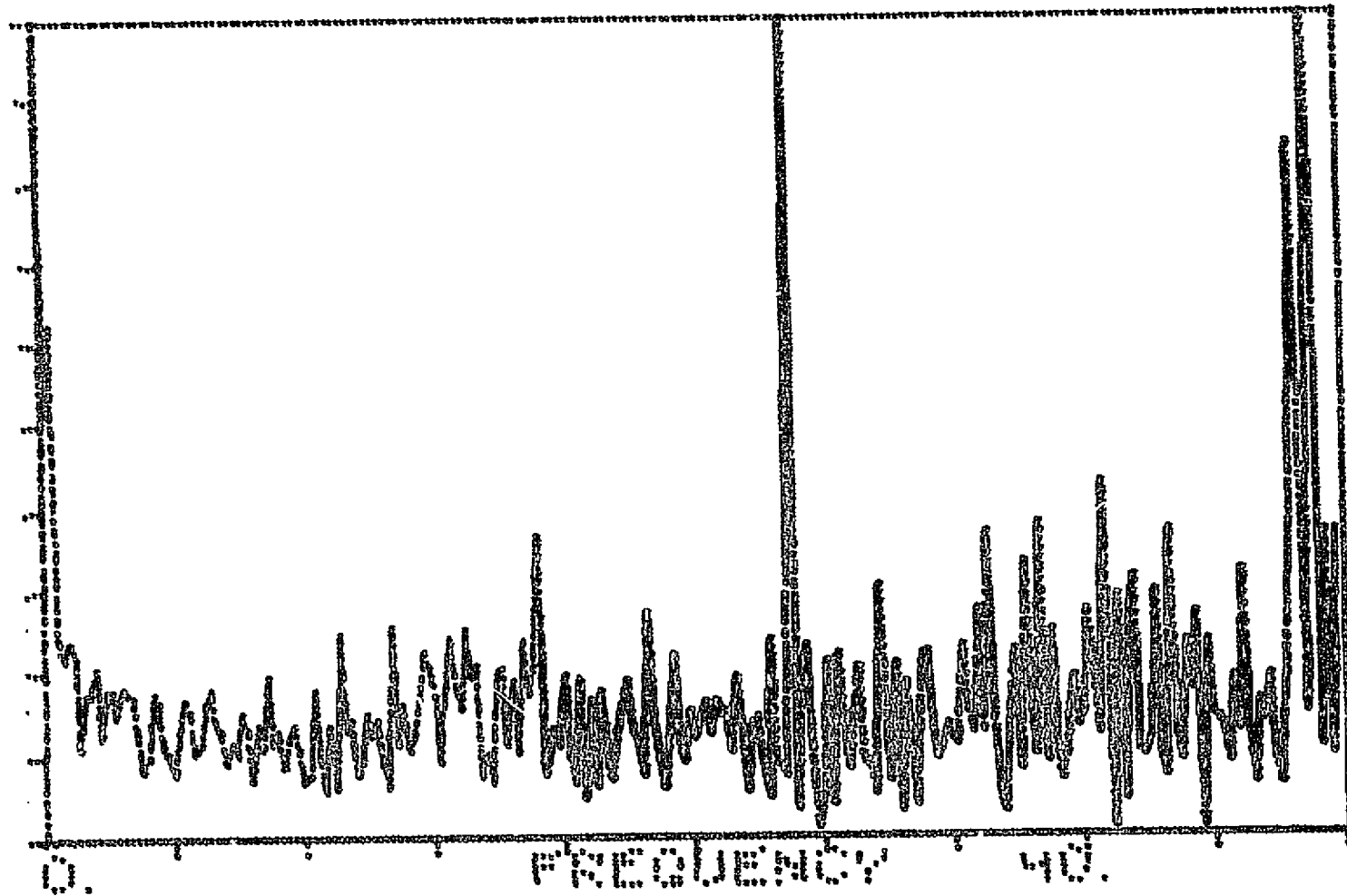
SIZE= 356

AL11/FL1

20.

mach

20.



COMPLEX

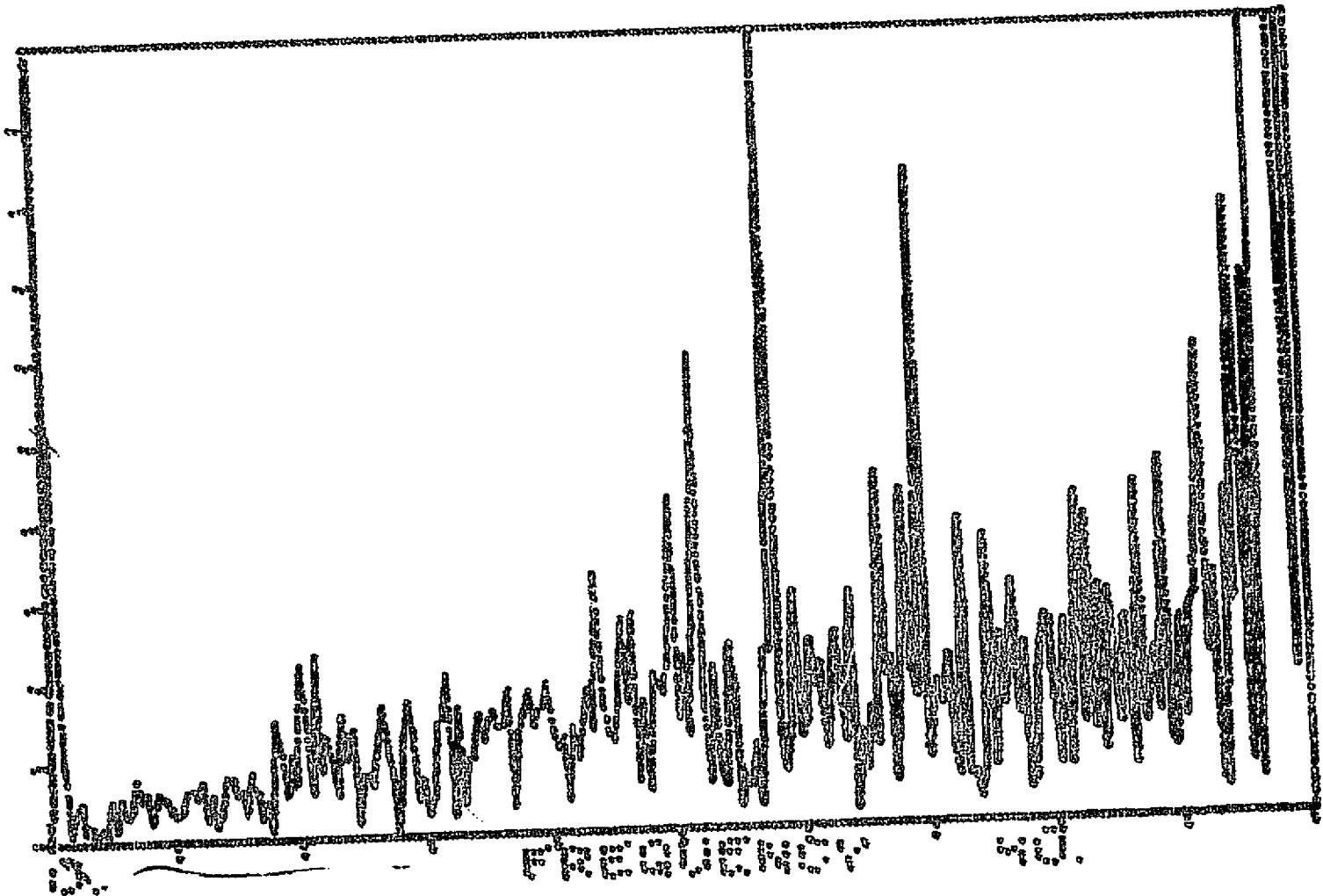
SIZE 256

$\Delta P/FL1$



10.

10.00



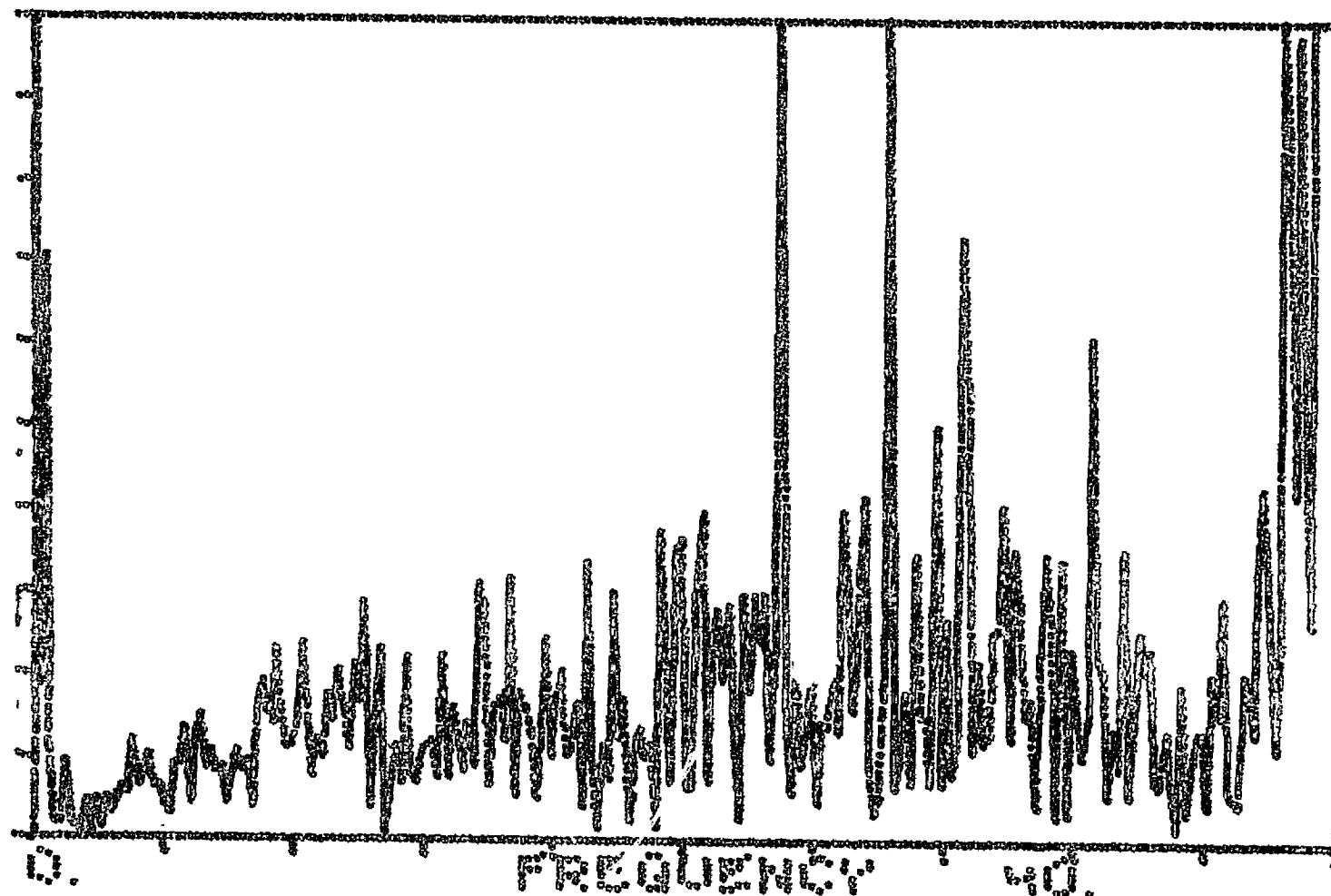
COMPLEX SIZE 256

AL4/FL1

10.

1964

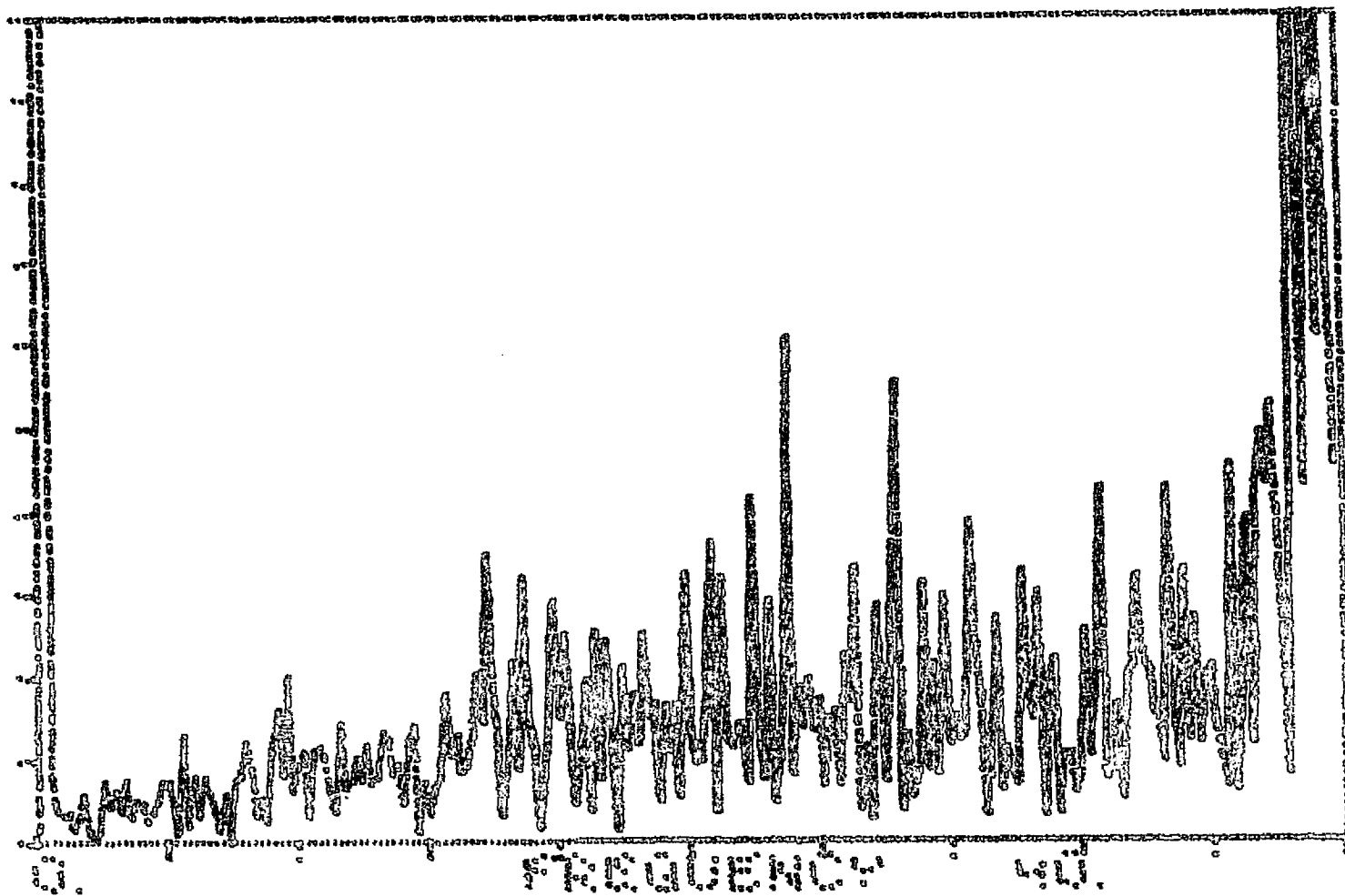
11.



COMPLEX

SIZE: 356

AL5/FL1



0.000000

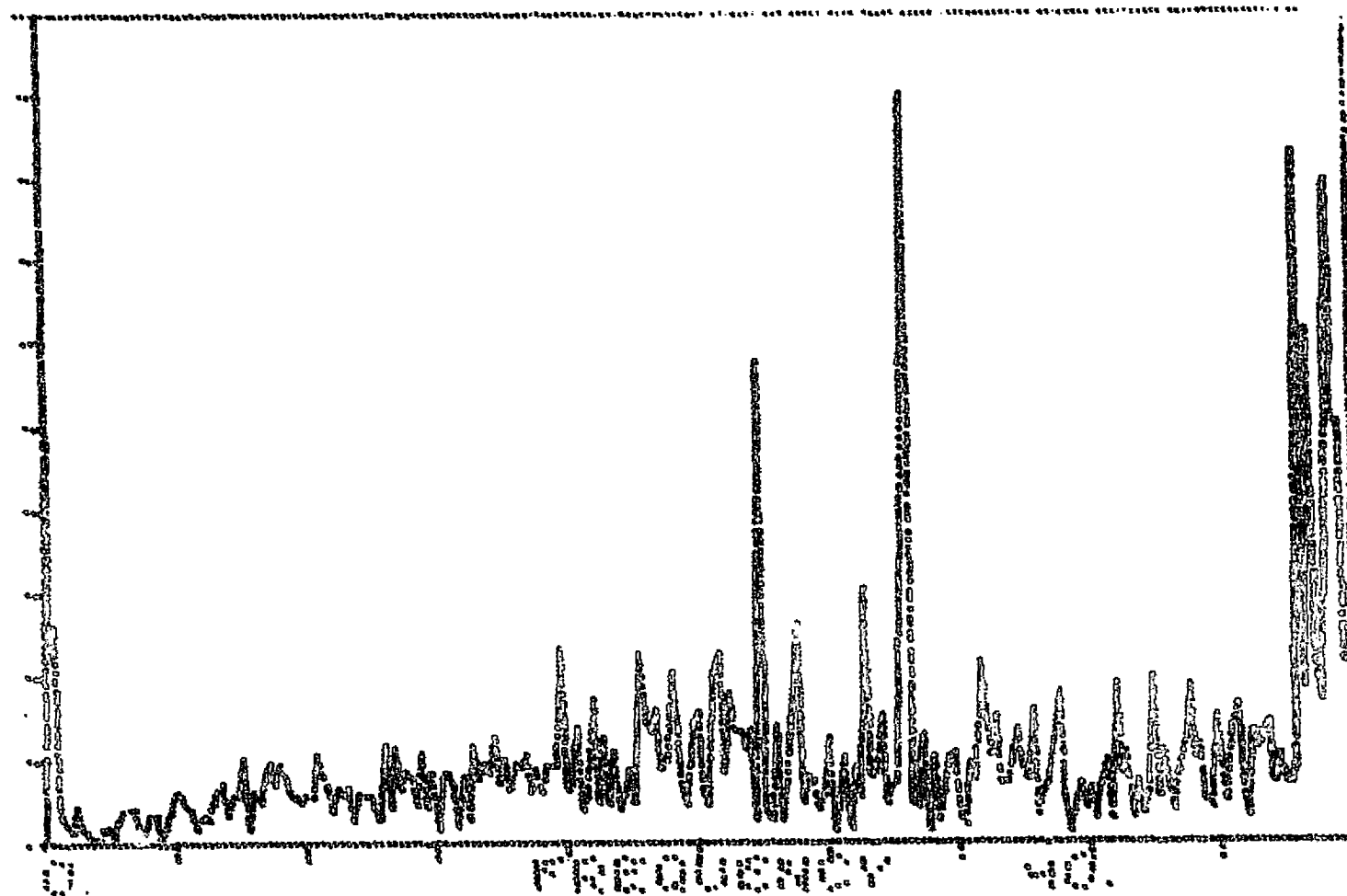
0.000000

AL8/FL1

20.

1954

0.



COMPLEX

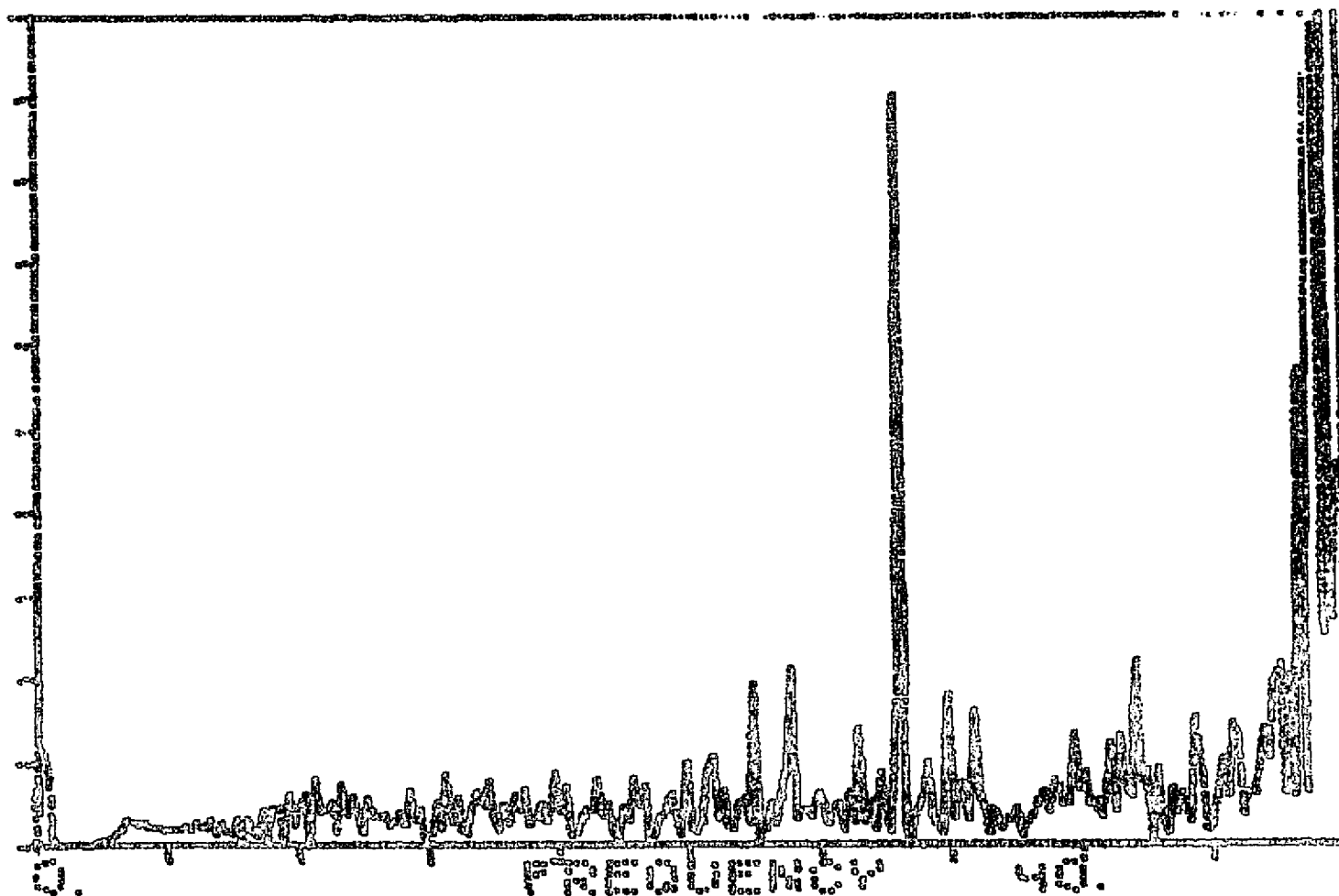
SIZE 256

AL9/FL1

00

NON

00



COMPUTER

0123 235

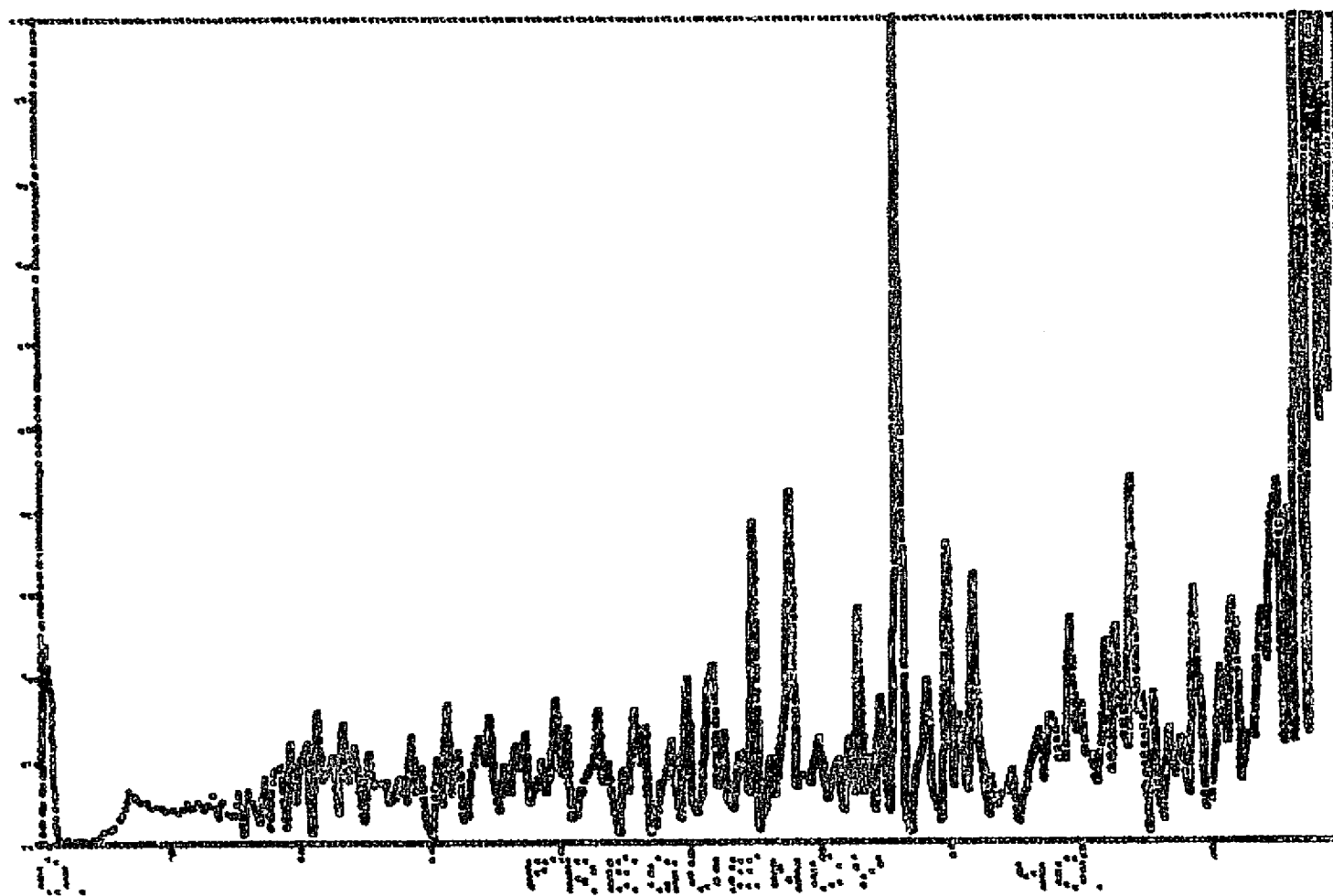
AL10/FL1



10.

196M

0.



COMPLEX

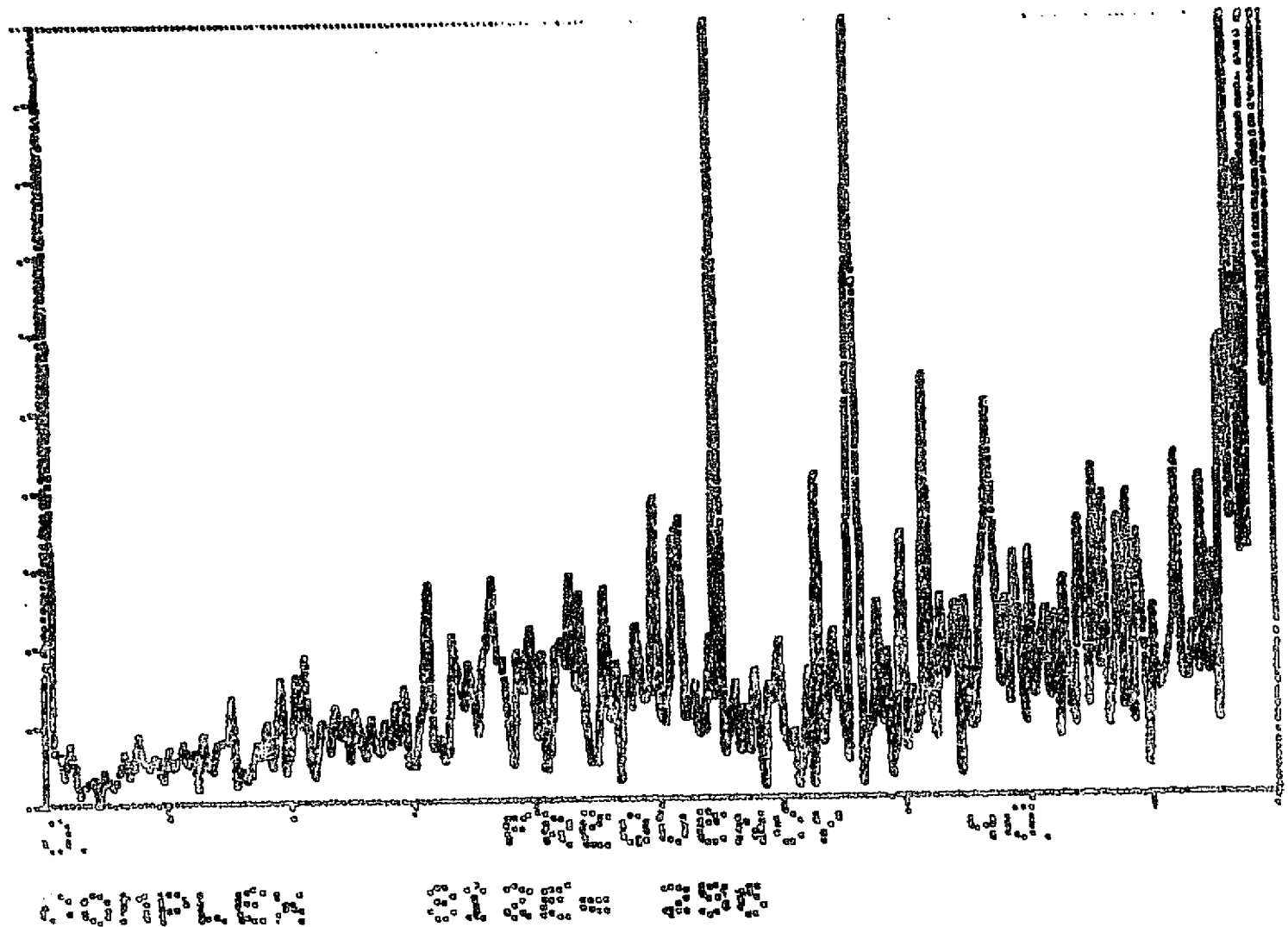
01234 050

AL10/FL1

10.

1962

0

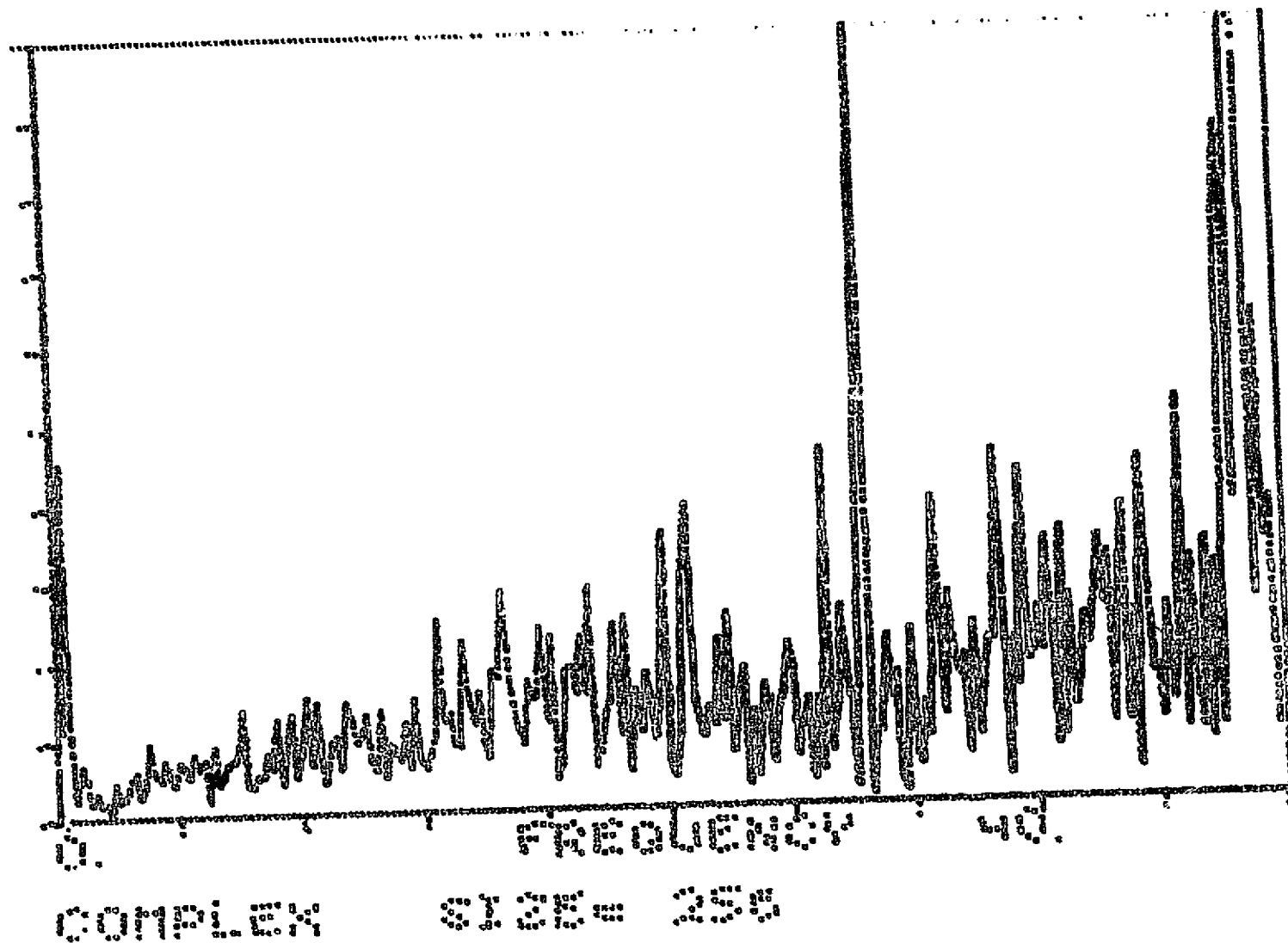


AL12/FL1

40.

40.000000

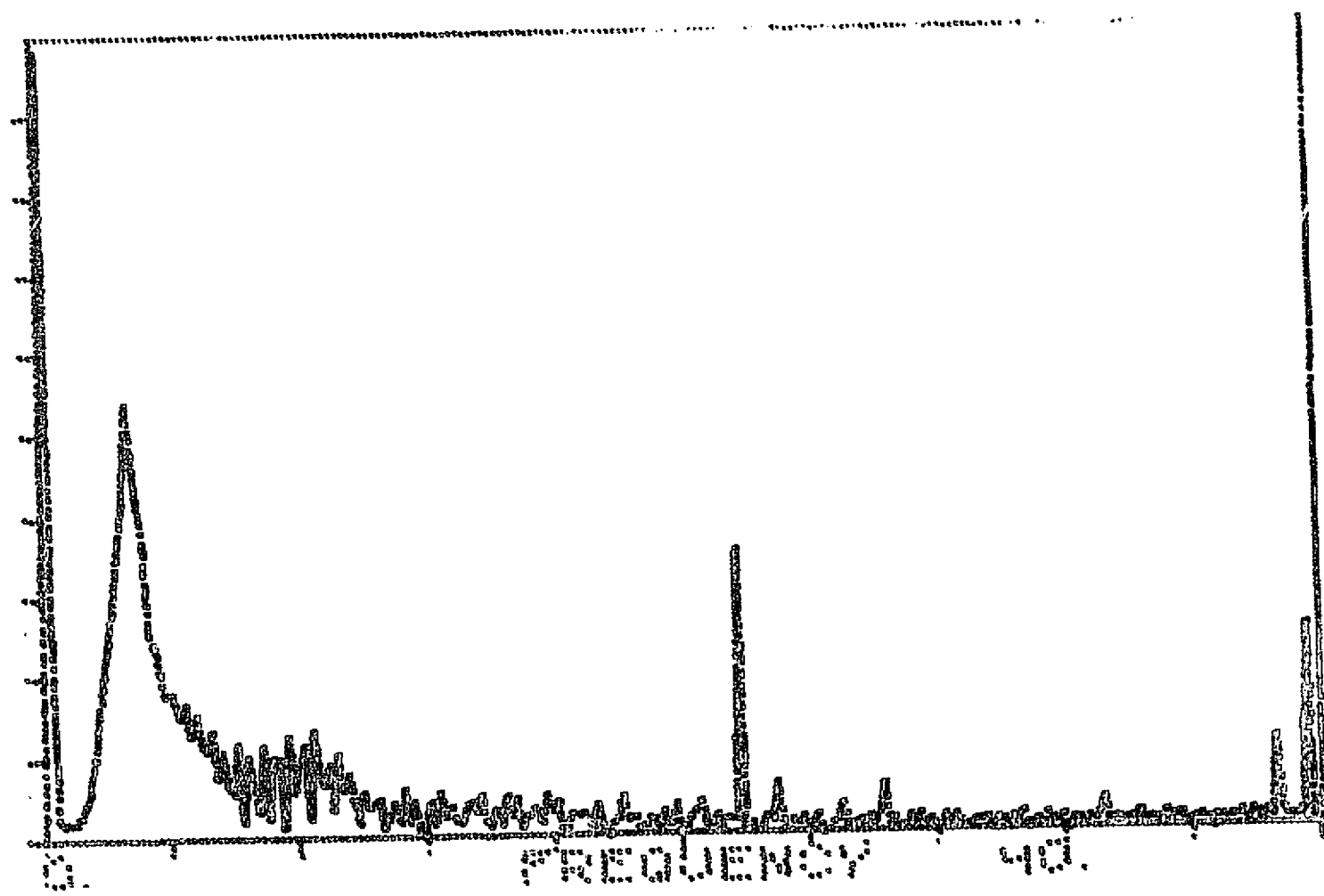
40.



a.

mag

a.



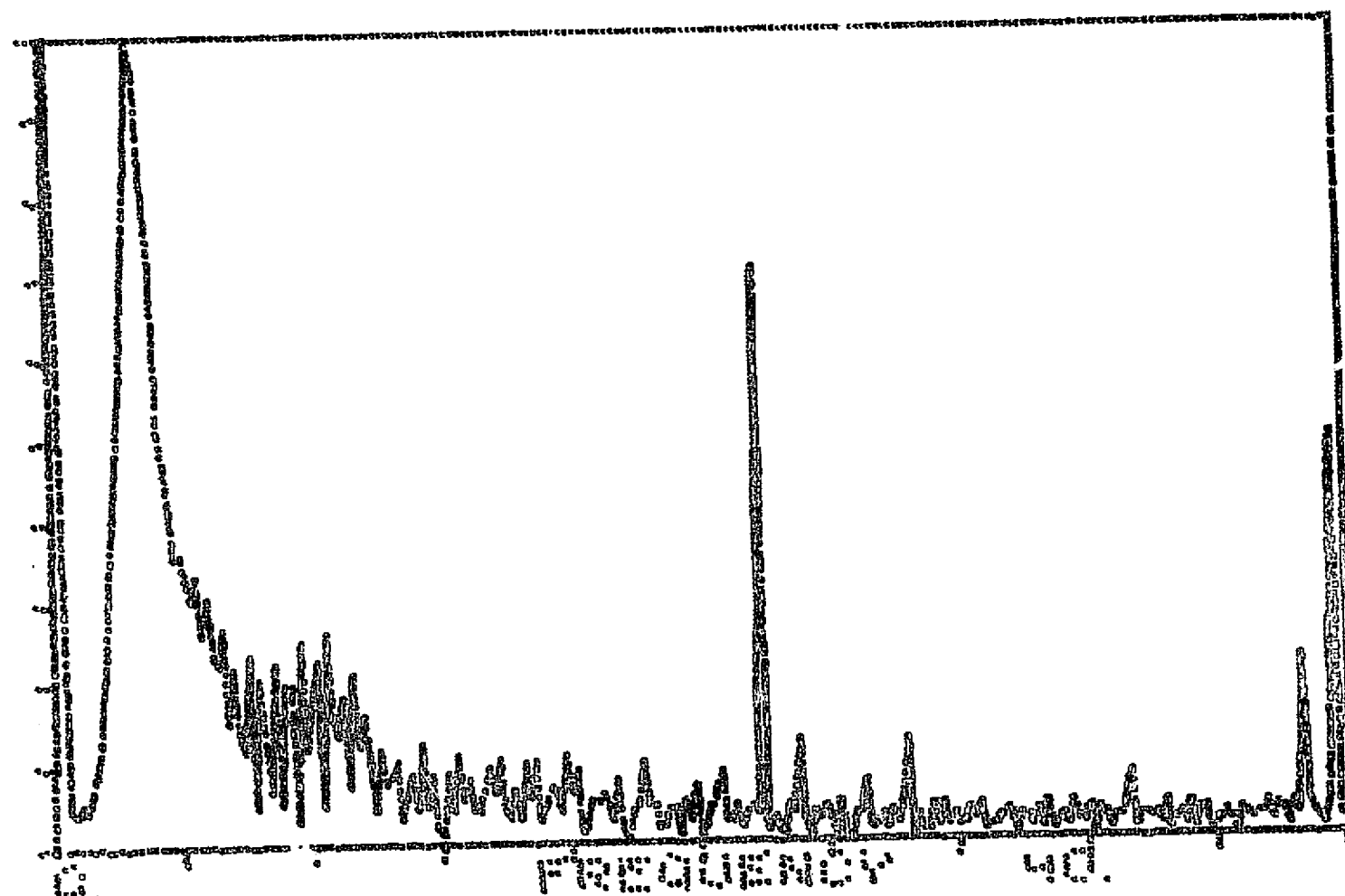
CUMPLEX SIZE 256

DL1/FL1

4.

100

0



COMPLEX

SIZE = 356

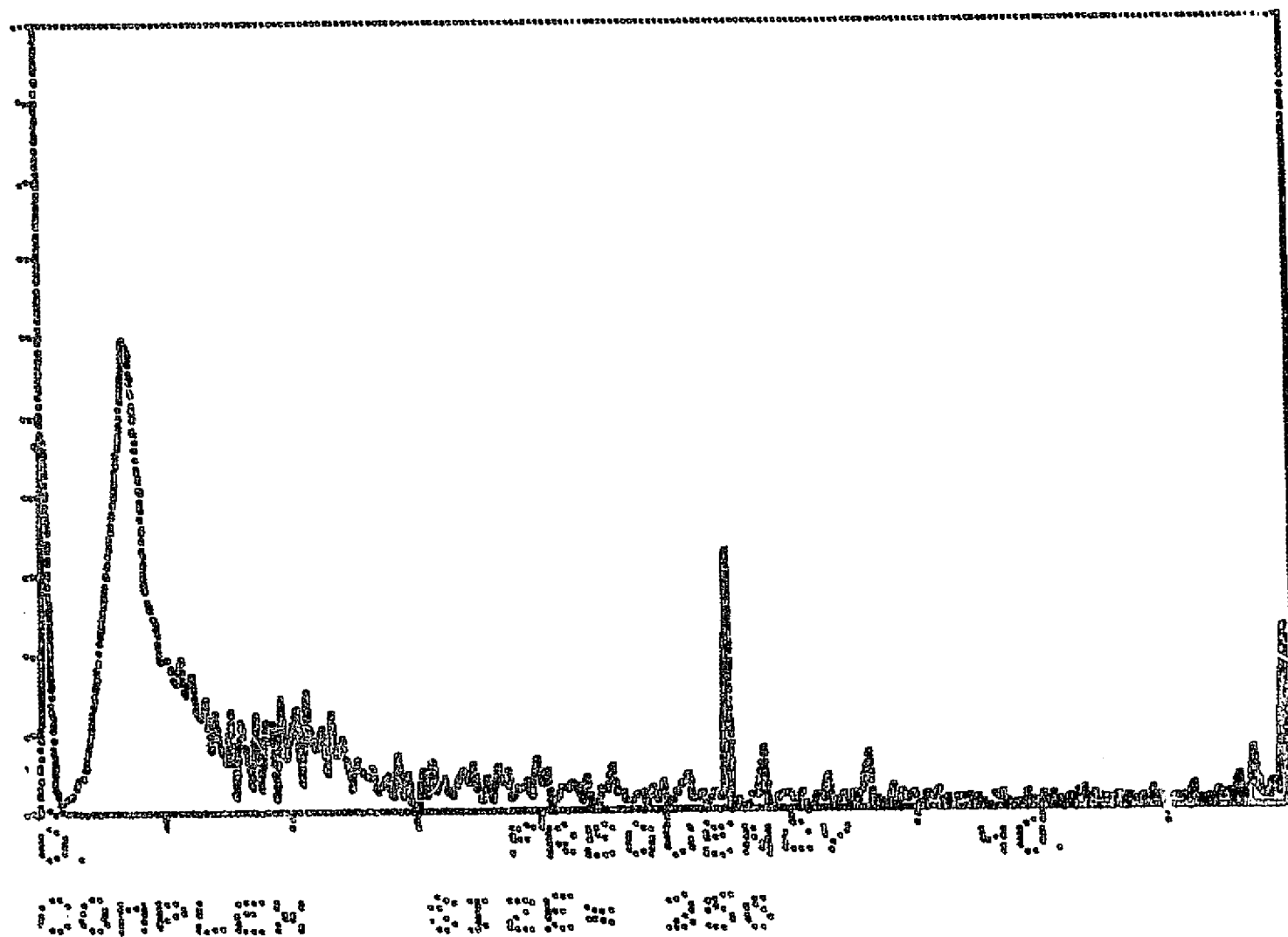
DL1/FL1



2.

1950

0.

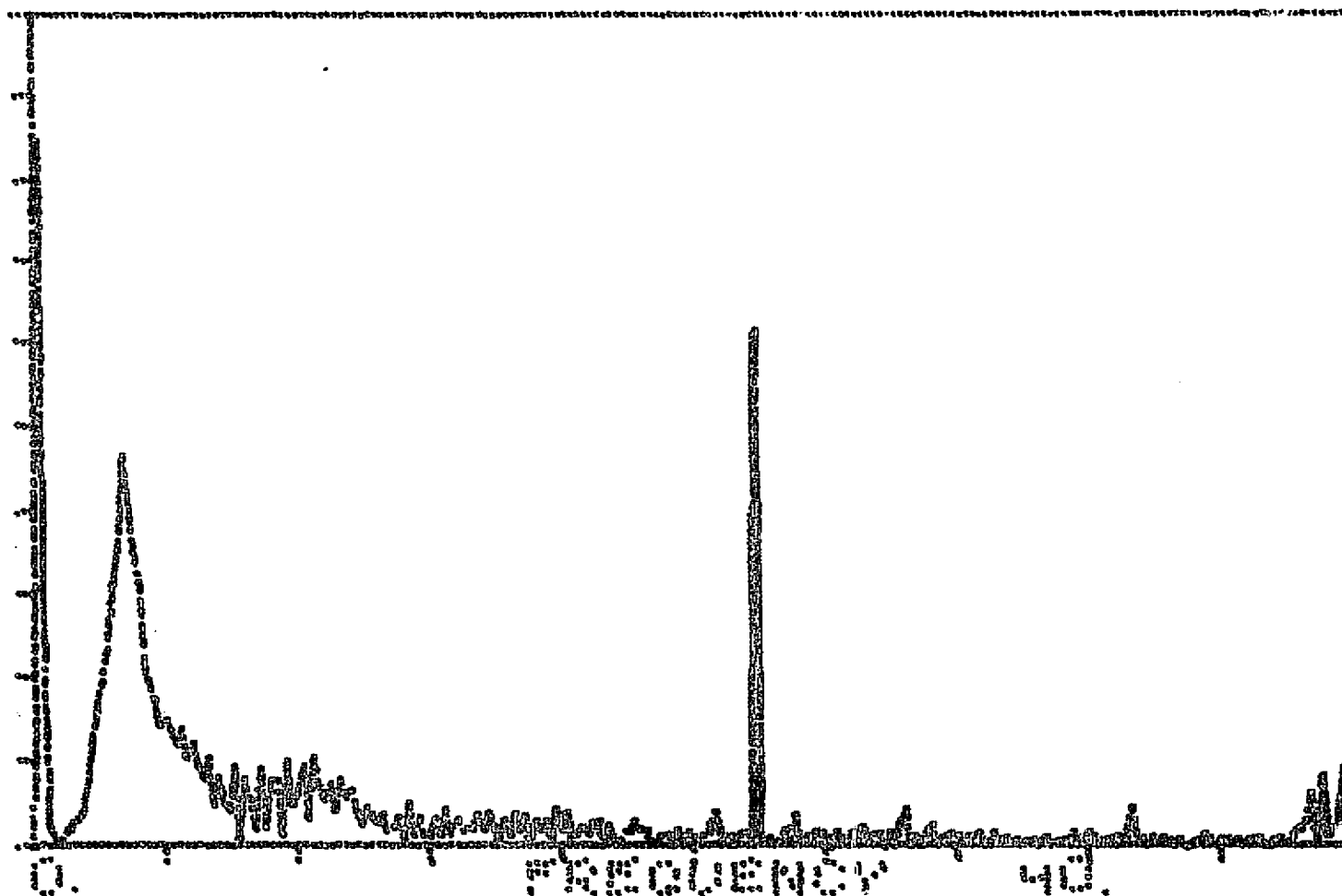


DL2/FL1

1.

1969

0.



COMPLEX

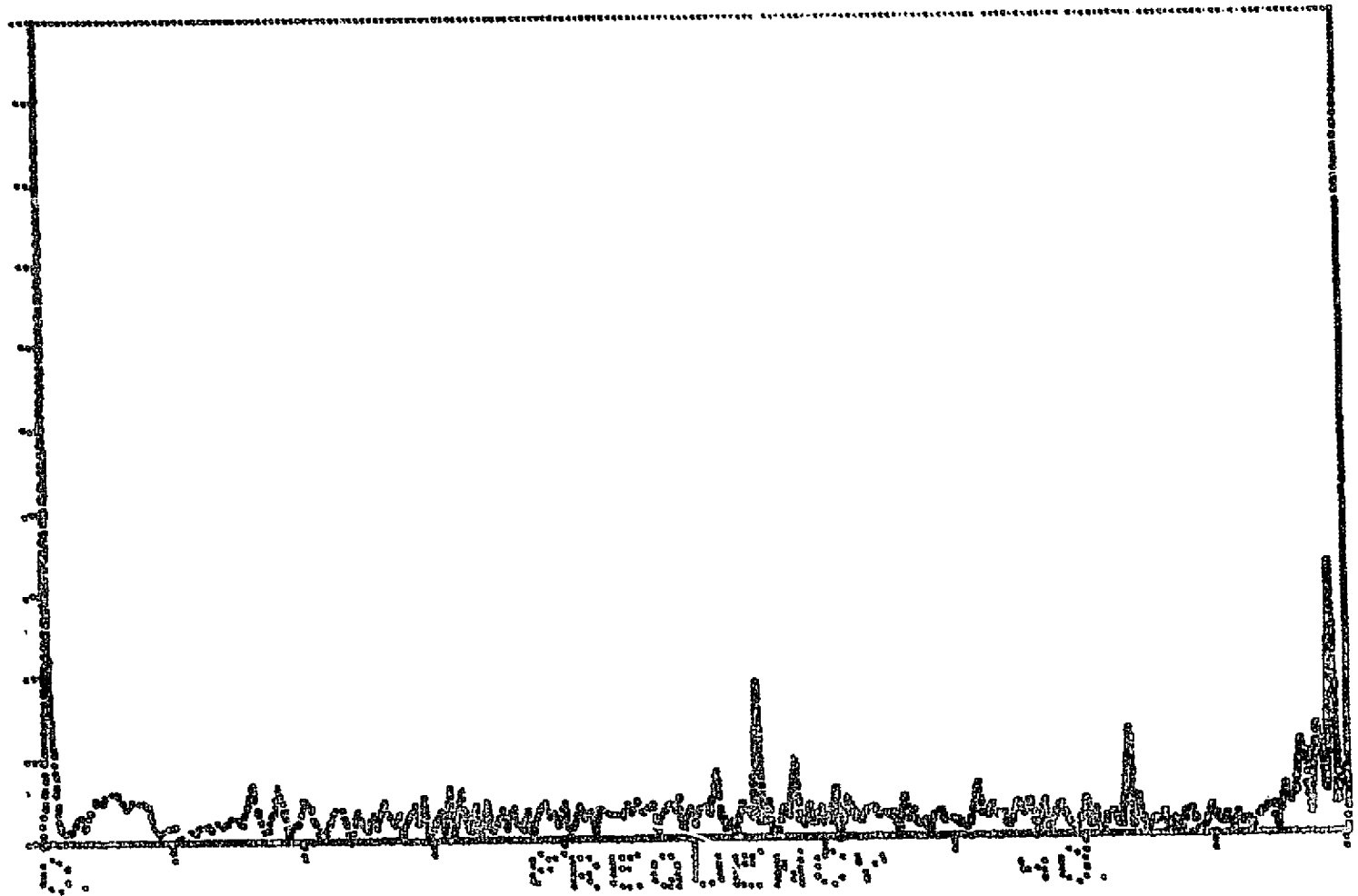
SI 236

DL3/FL1

5

11:00 AM

2



CORPUS

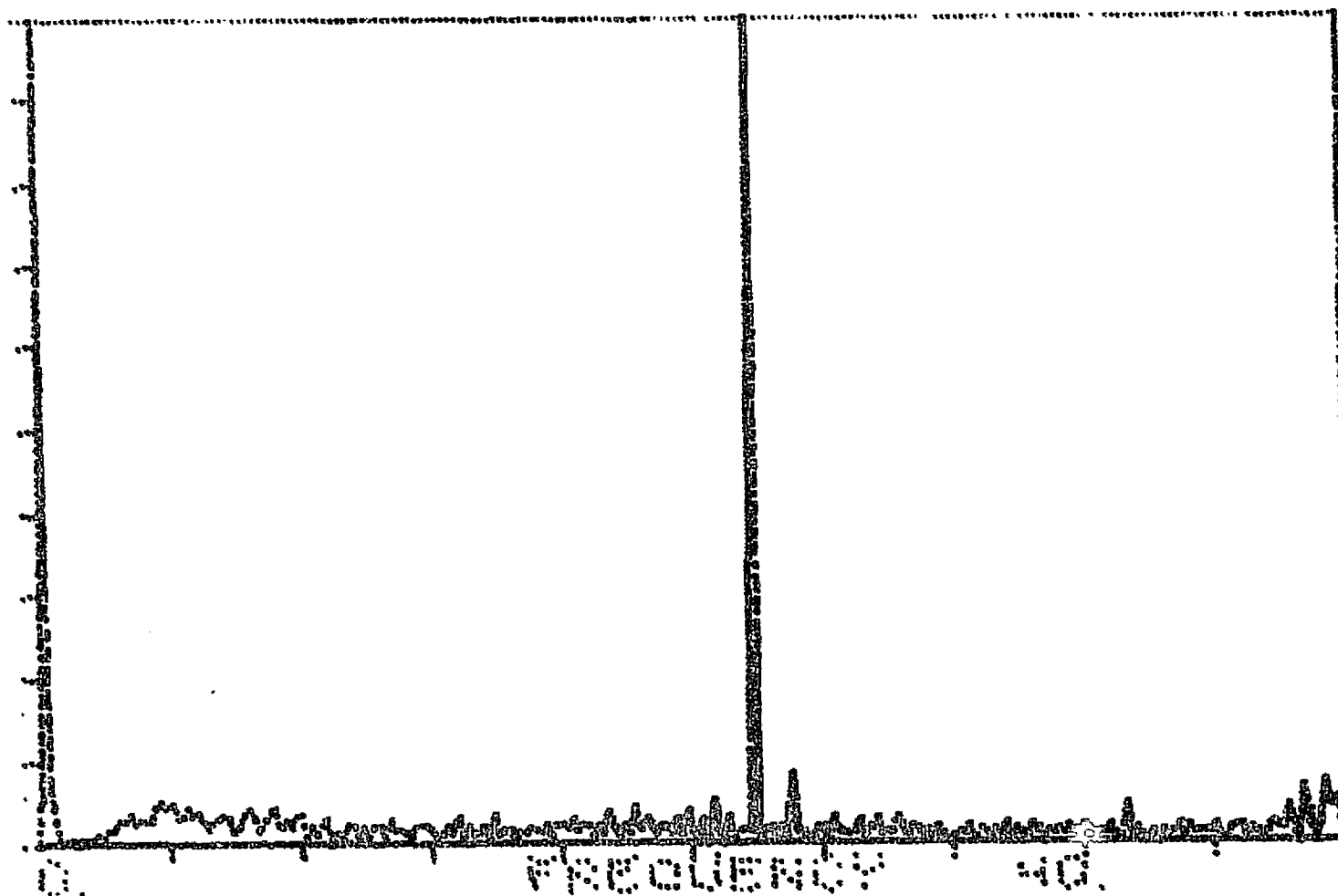
SIZE: 255

DL4/FL1

1.

mgm

0.



COMPLEX

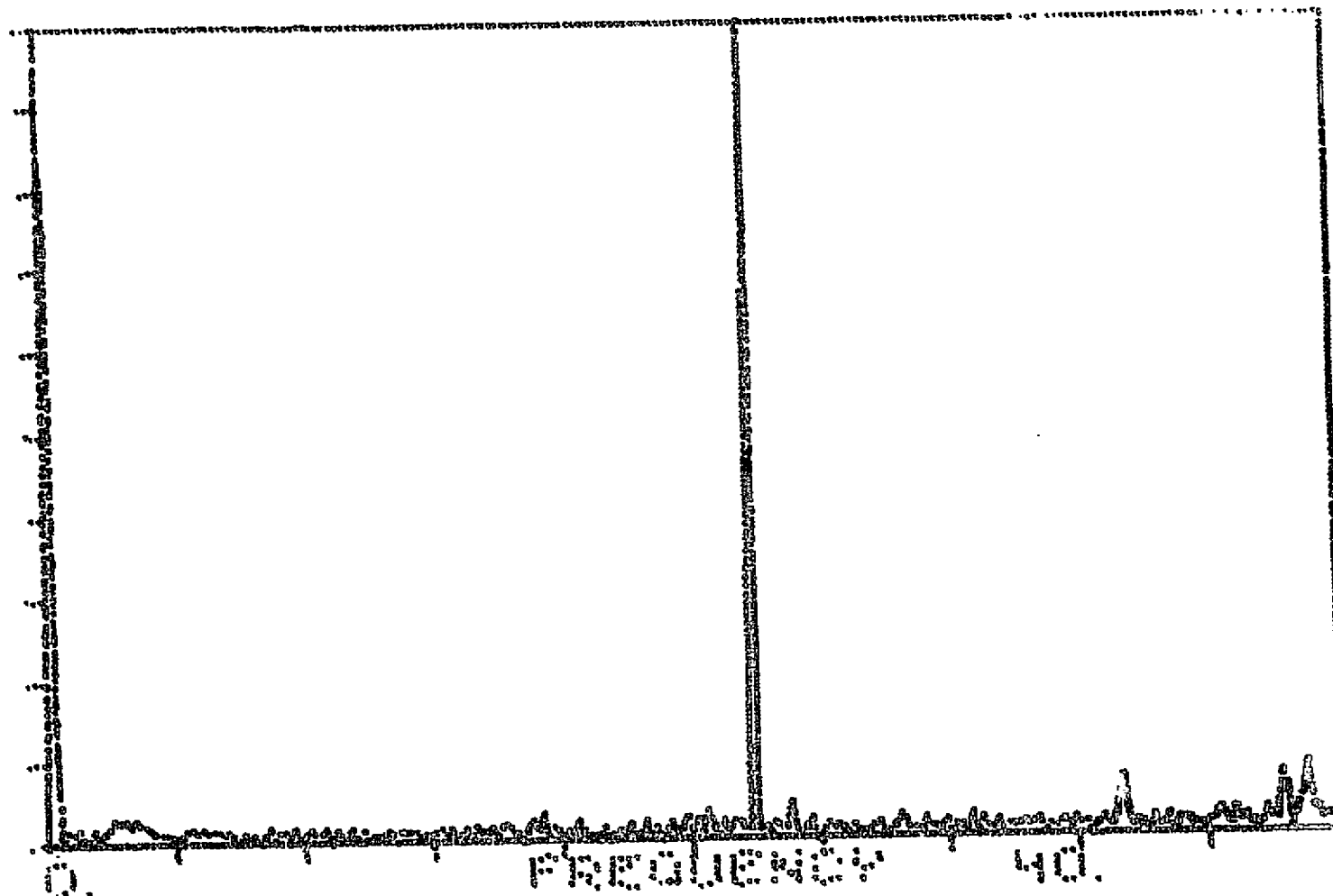
SIZE 256

DL5/FL1

1.

mag

0.



COMPLEX

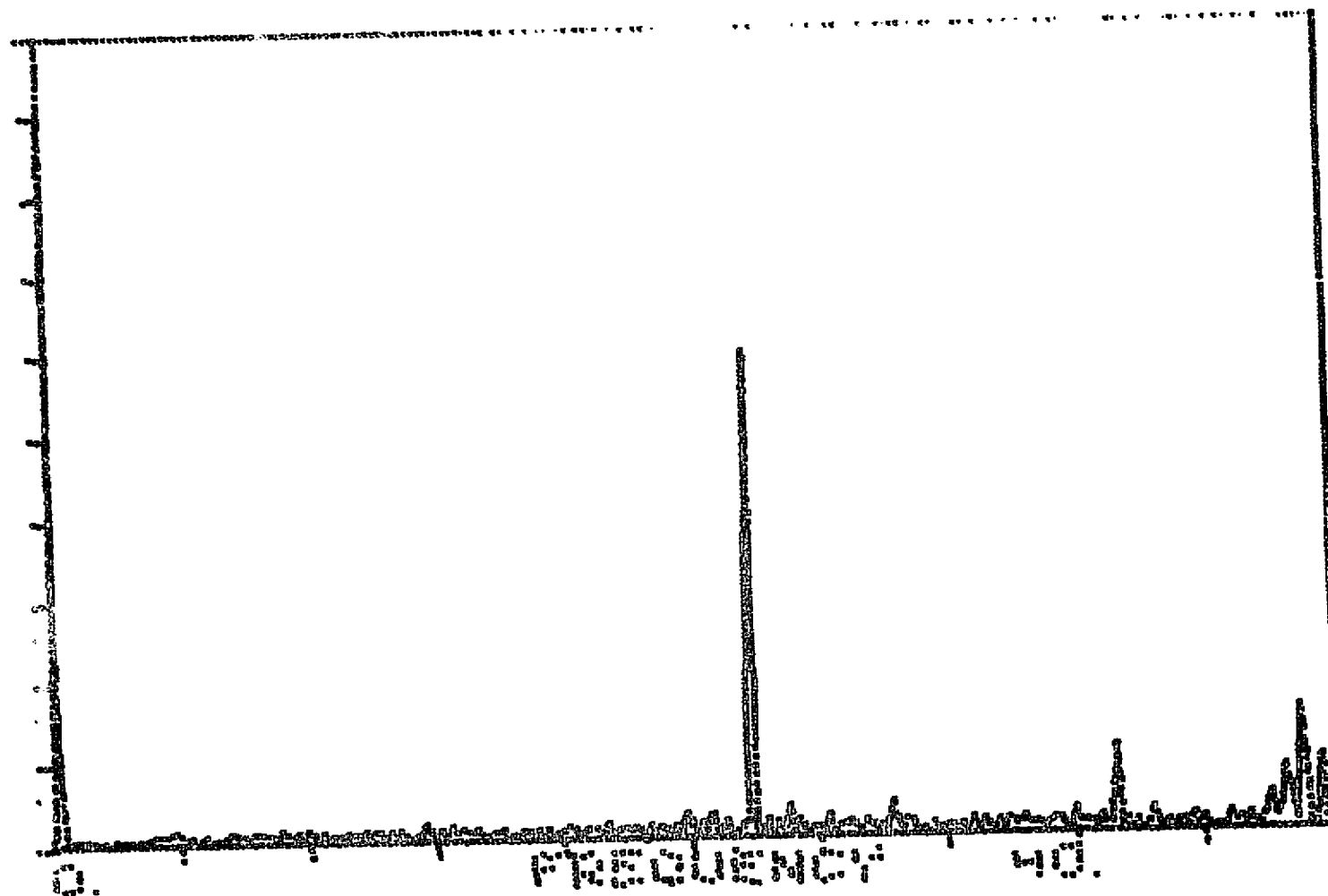
SIZE = 255

DL6/FL1



1.

1964



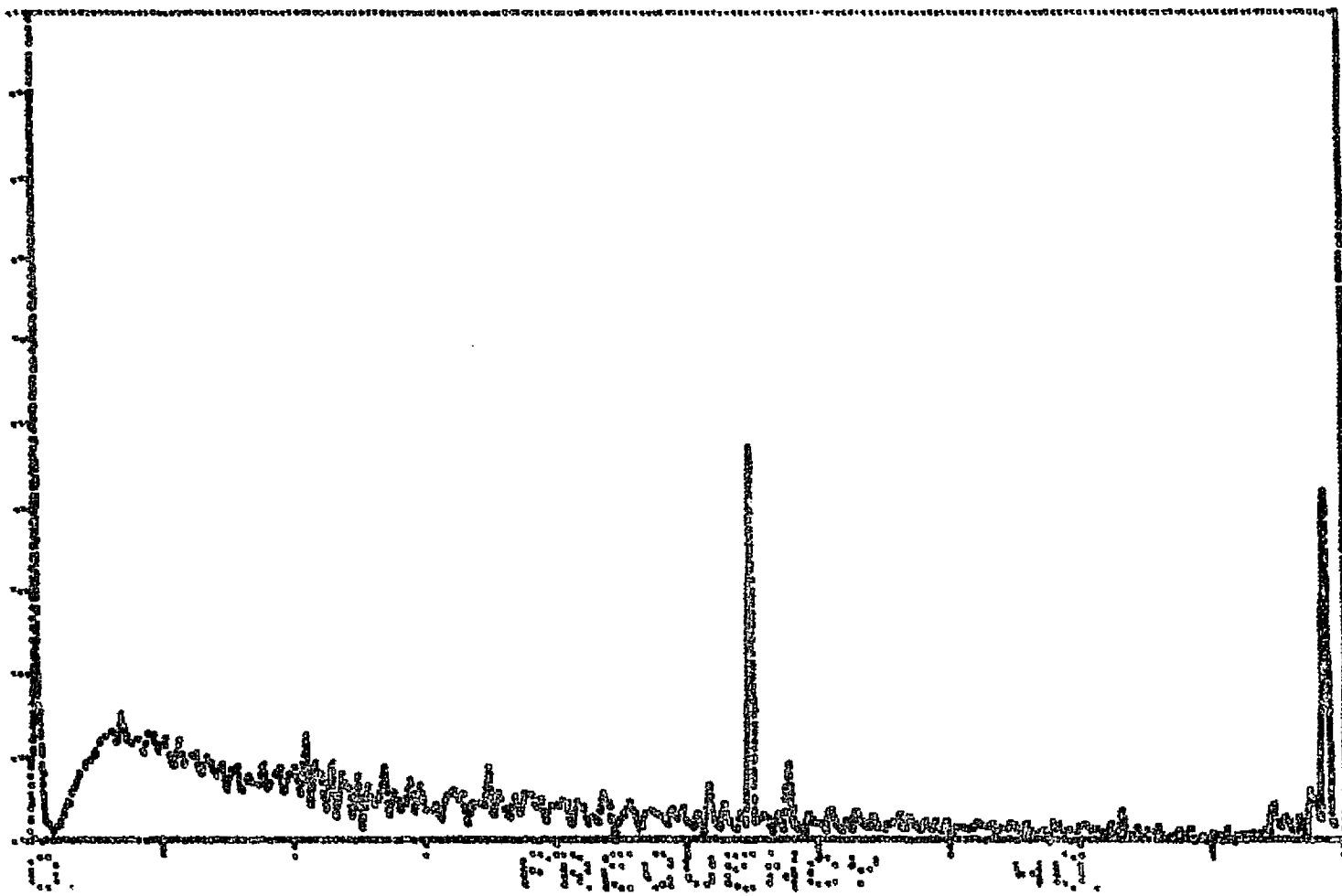
COMPLEX

31 32 33

1.

mag

0.



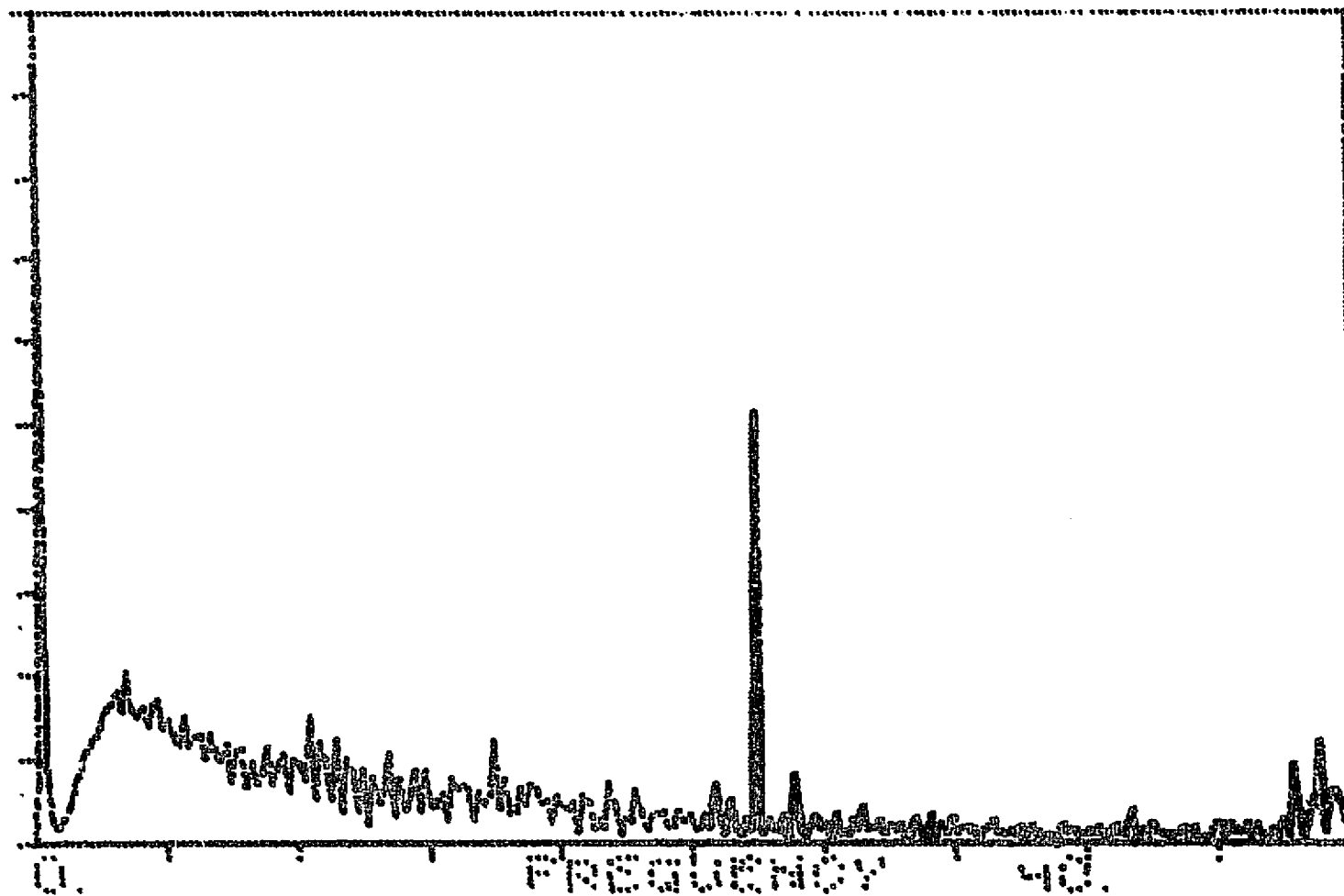
COMPLEX

255 441

3.

1964

0.



COMPLEX

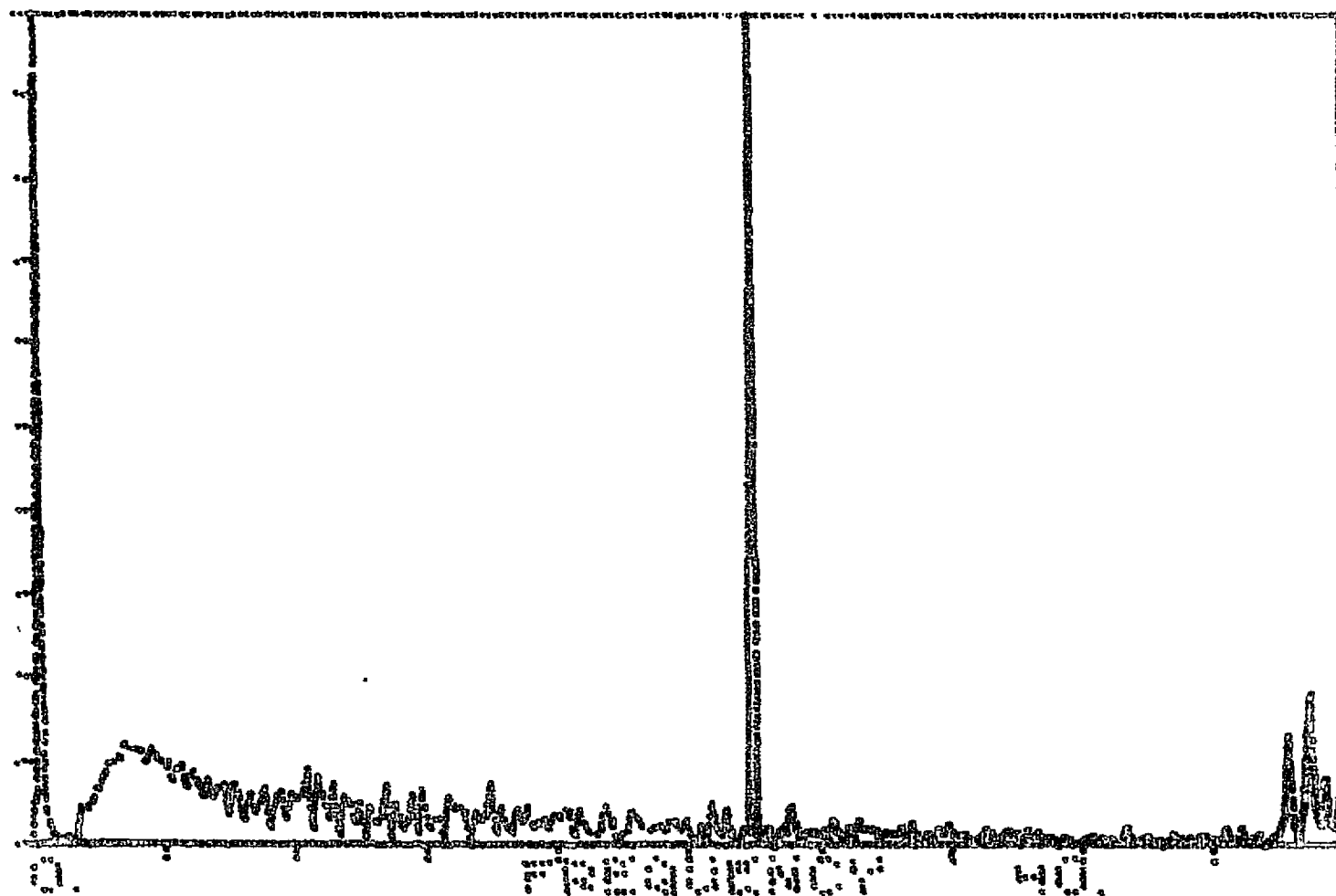
81280 358

DL9/FL1

1.

magh

0.



COMPLEX

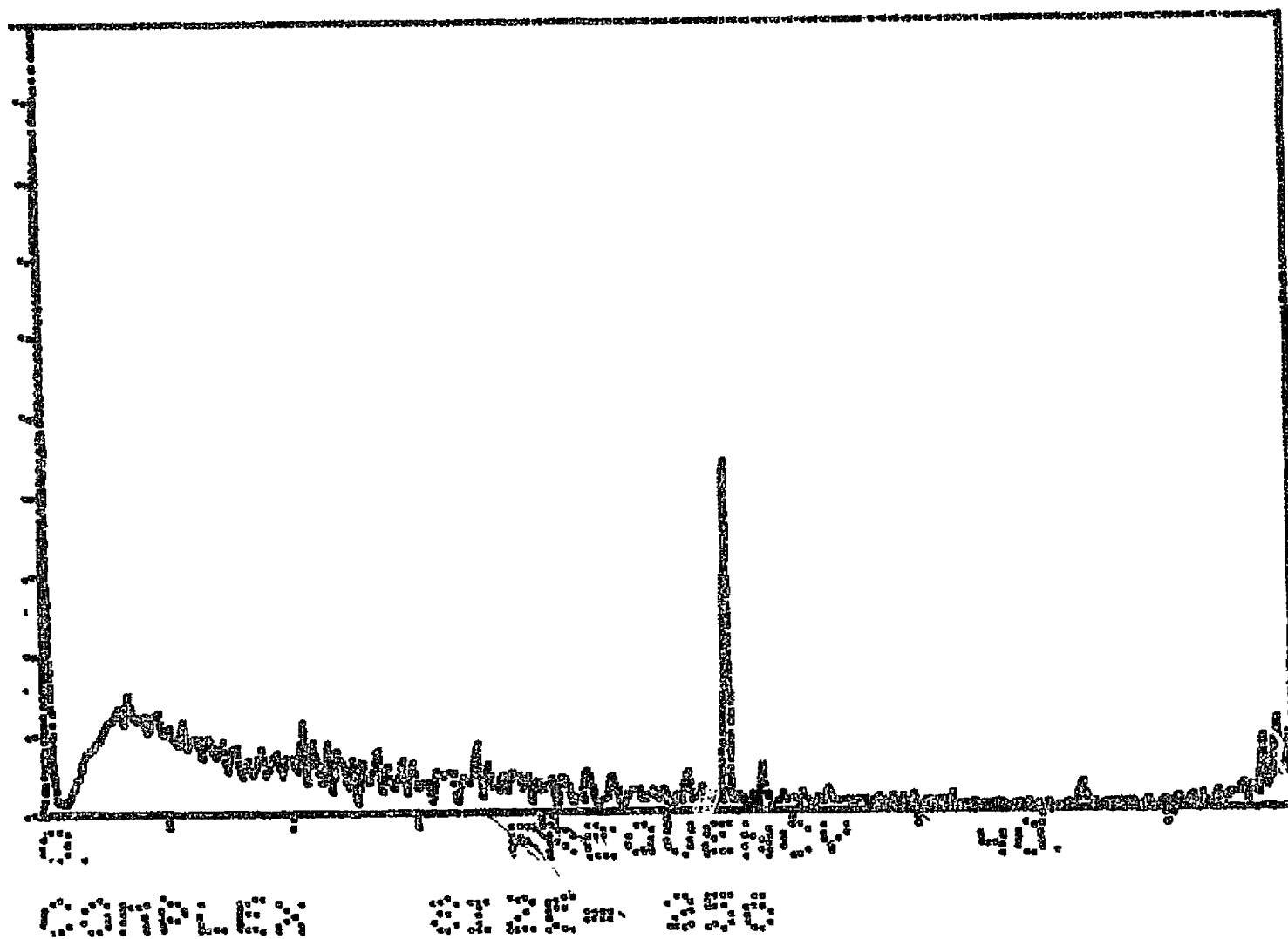
SIZE: 333

DL10/FL1

1.

mgm

2.

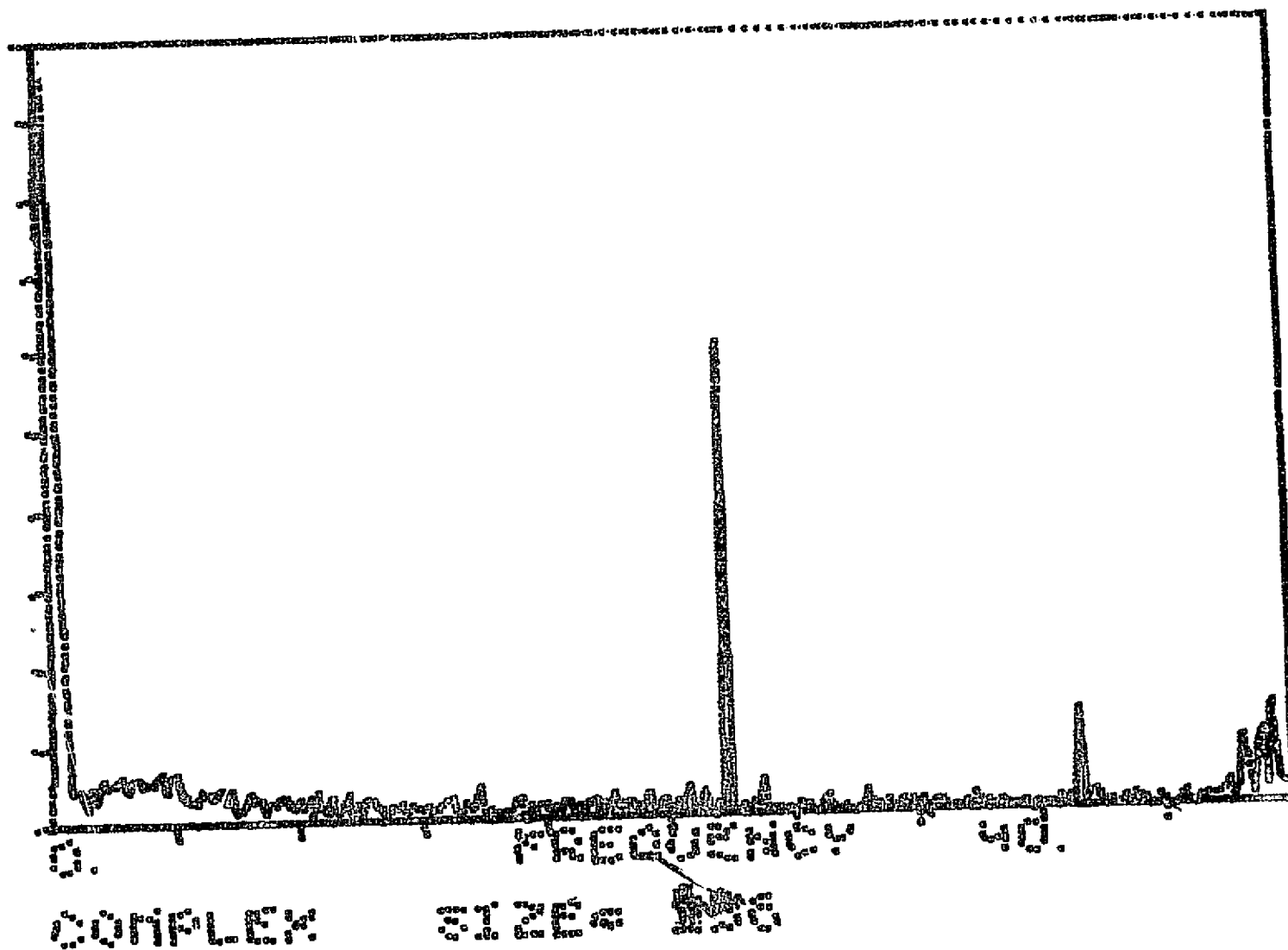




1.

1964

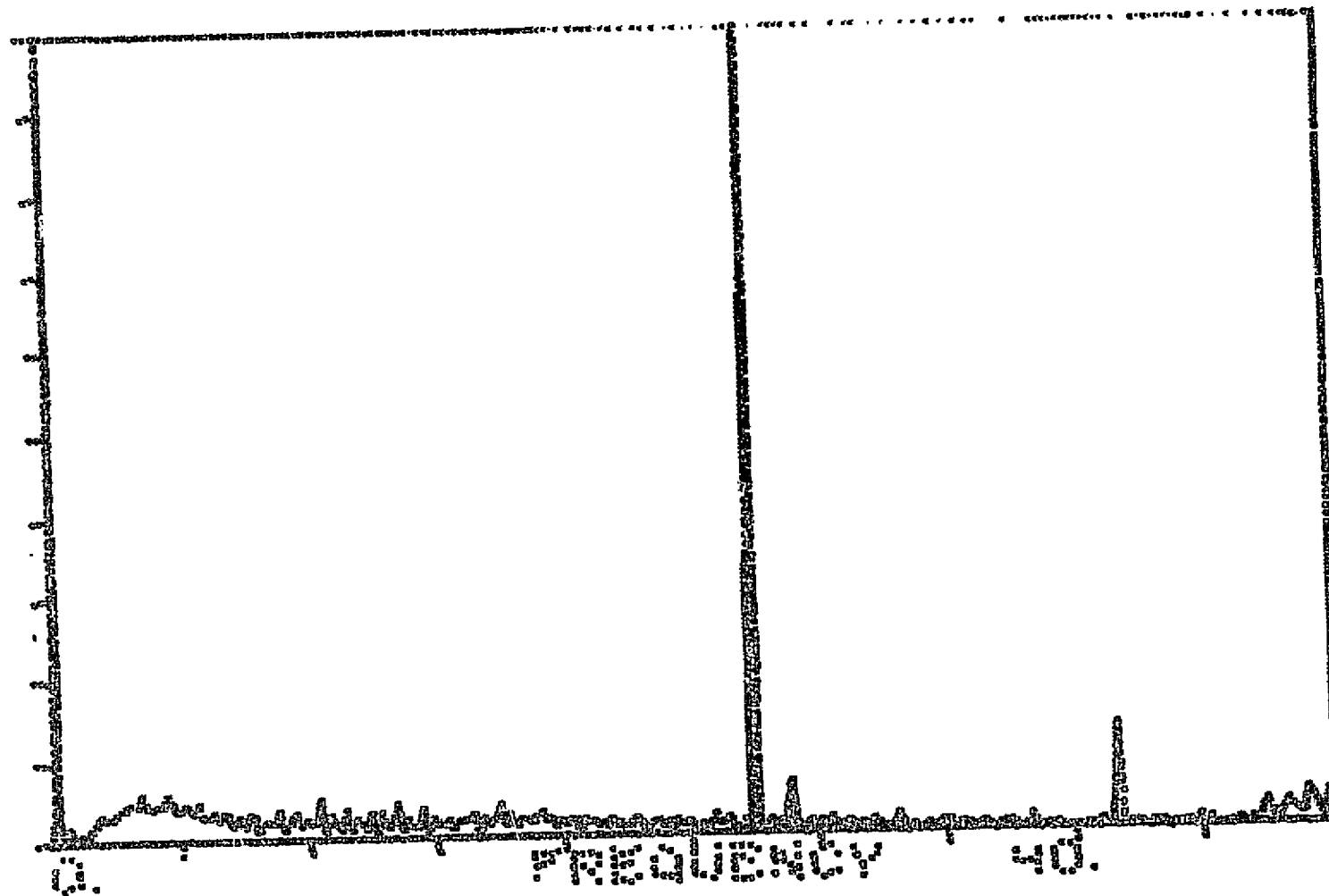
0.



1.

max

0.



complex

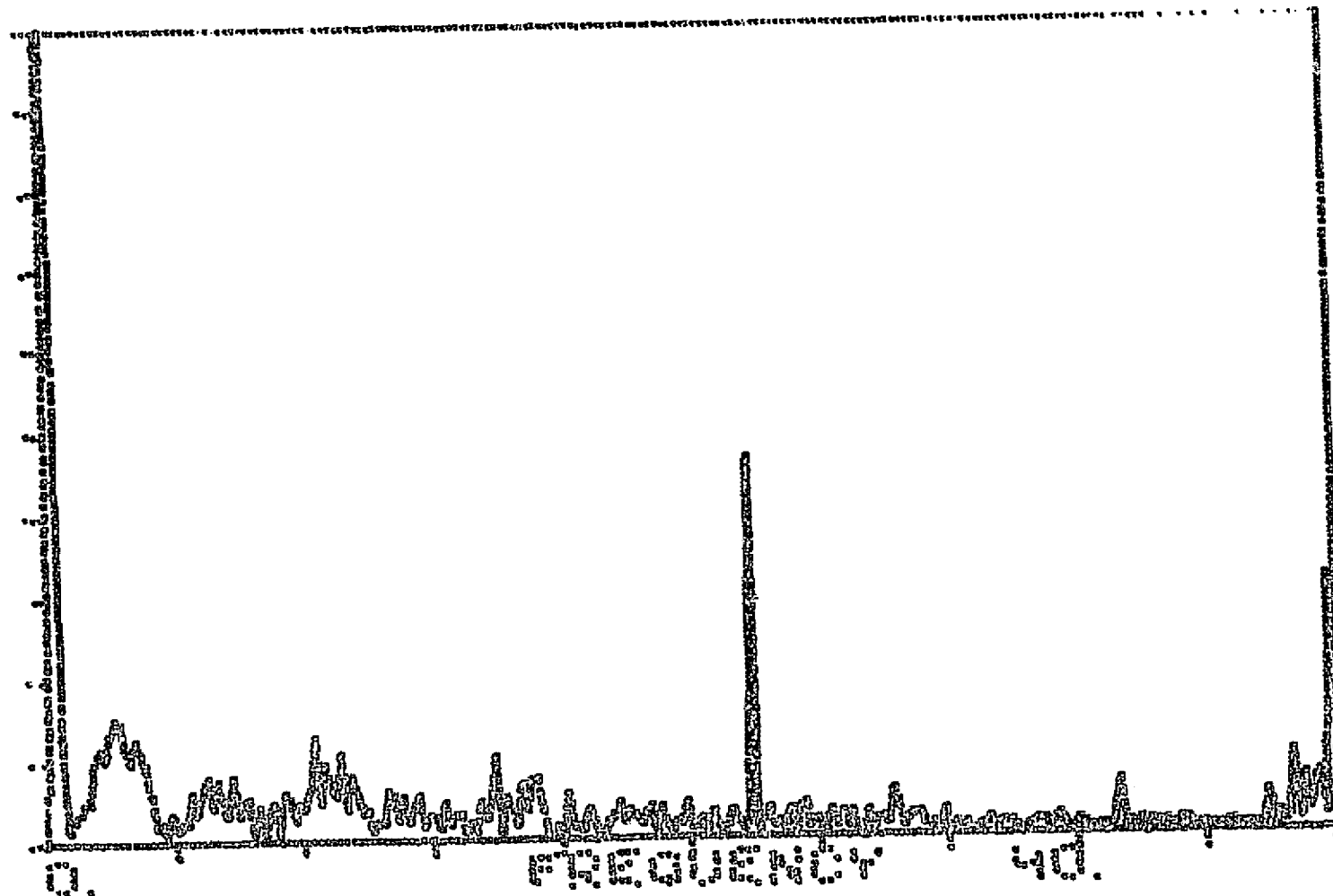
size 333

DL13/FL1

1.

11/11/11

2.



CONFLA

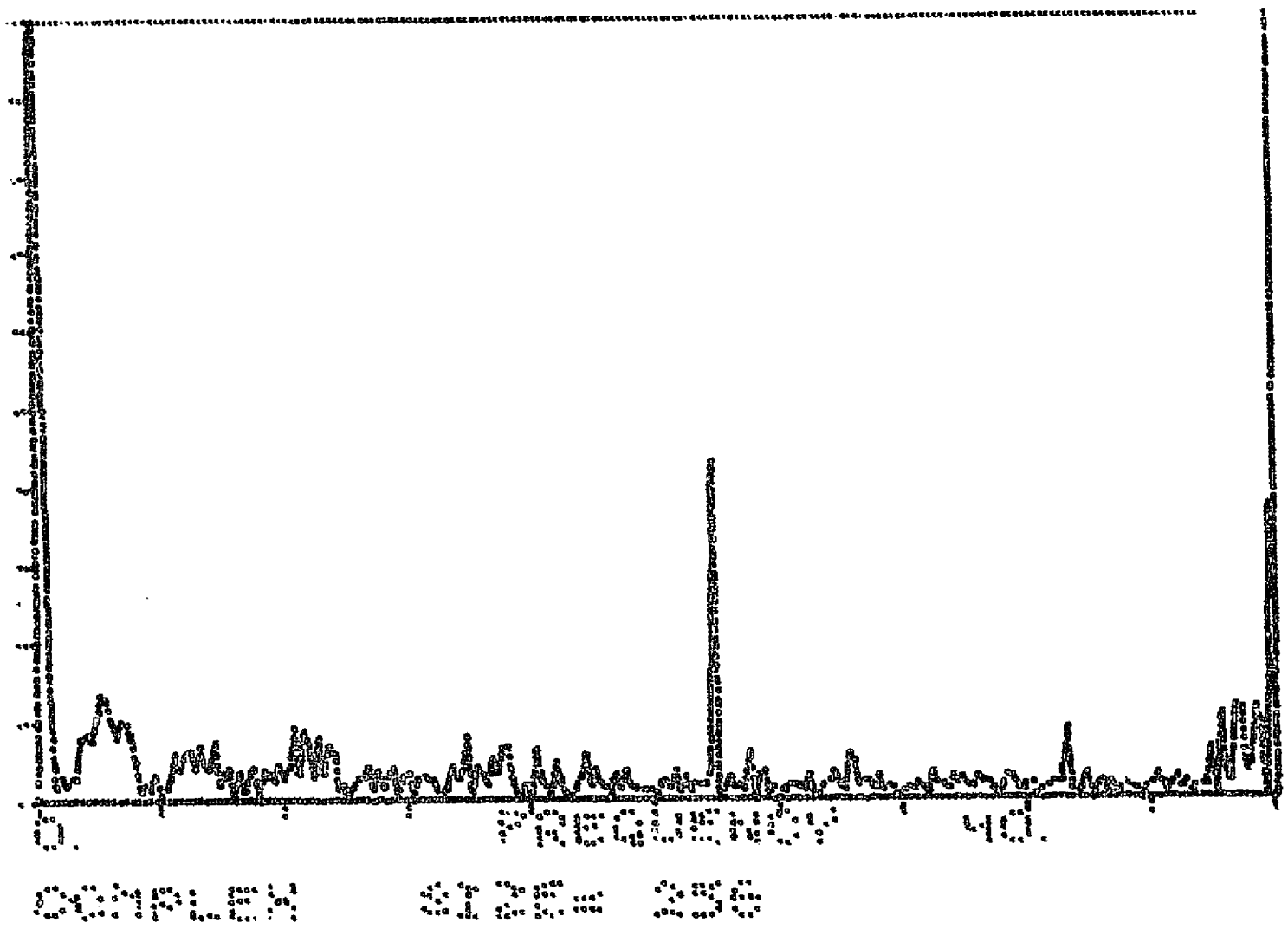
01:11:11

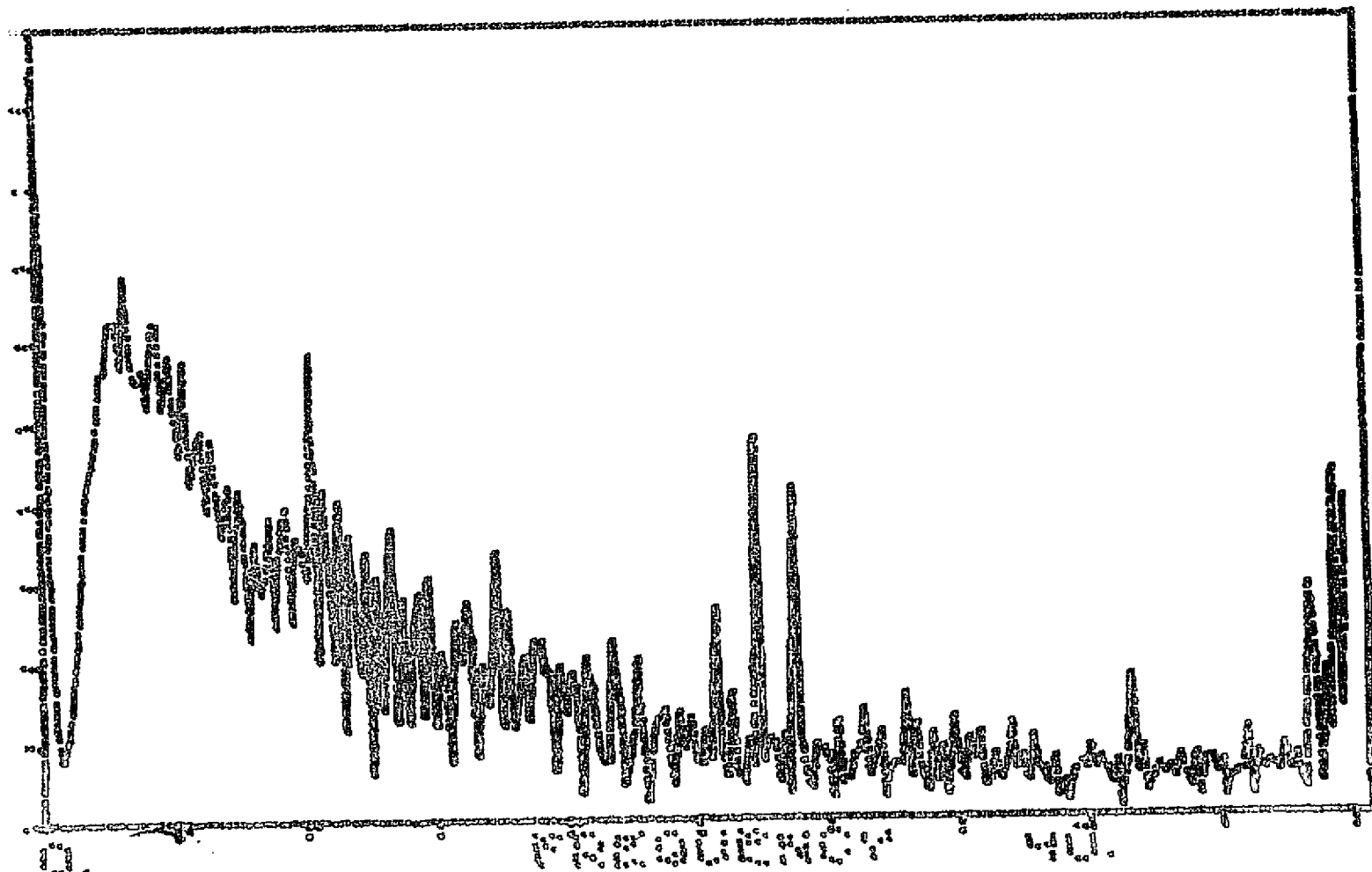
DL14/FL1

4.

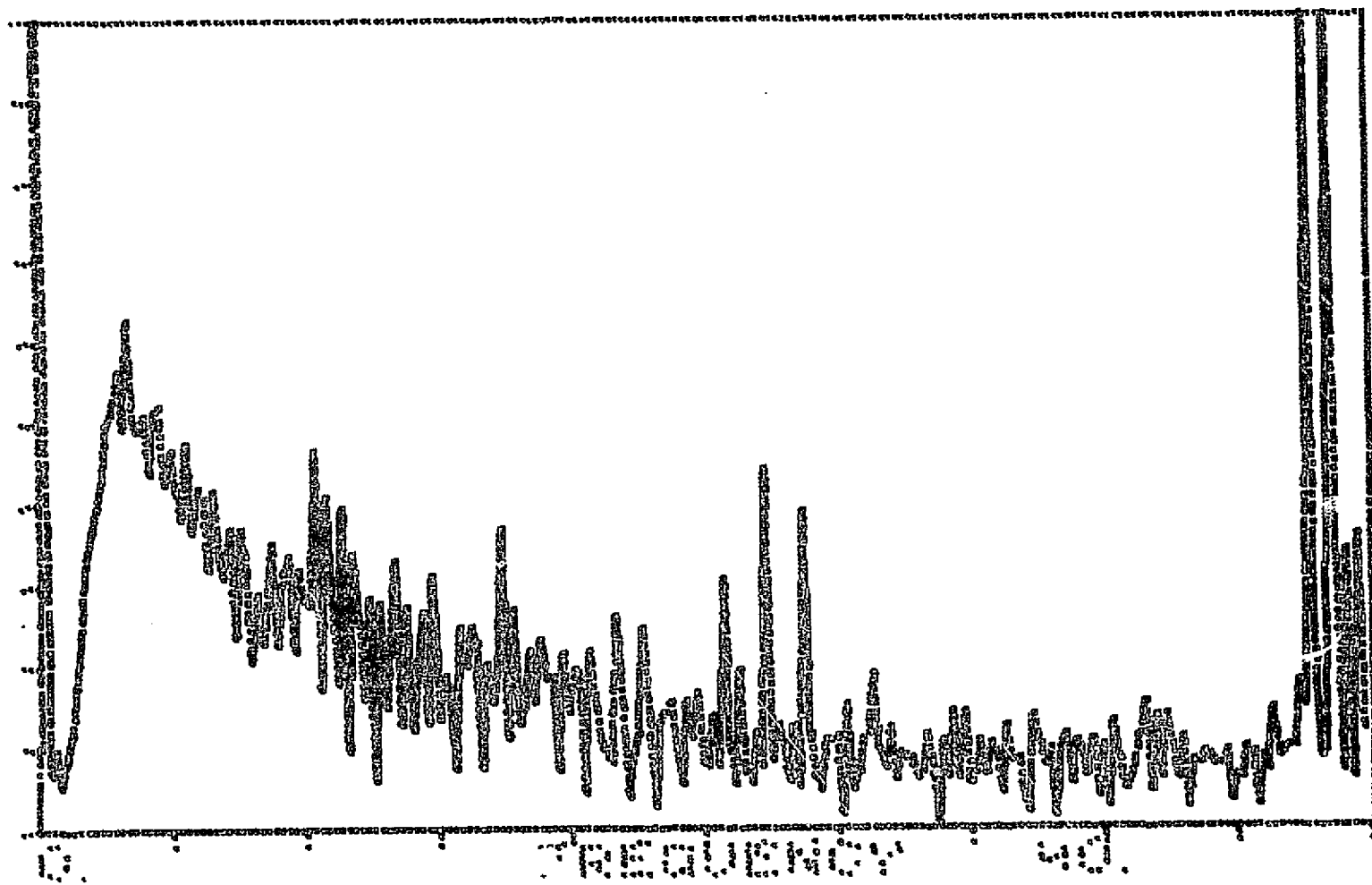
1000

0.









COMPLEX

SIZE: 256

VOLUME IIRUN 14 TEST DATA

Y-AXIS, 4510 POUND/ACTUATOR TEST LEVEL,  
ACTUATORS 180° OUT OF PHASE

1 HEADING: TRAIN TRACK TRANSFER 4510 LB TEST 3/19/75

SWEEP PARAMETERS:

2 MODE 1=LOG, 0=LIN: 1.  
 3 TYPE 1=UNI-DIRECTIONAL, 0=BI-DIRECTIONAL: 1.  
 4 START, END FREQ, HZ: .5 50.  
 FREQ RANGE -- OCTAVES, DECADES: 6.644 2.  
 5 SPECIFICATION 1=RATE, 0=DURATION: 1.  
 6 UNITS 1=OCT/MIN, 0=DEC/MIN: 1.  
 7 RATE, OCT/MIN: 2.  
 SWEEP DURATION -- MIN, SEC: 3. 19.

TEST LENGTH:

8 SPECIFICATION 1=TIME, 0=SWEEP CYCLES: 0.  
 9 CYCLES: 1.  
 TEST TIME -- HRS, MIN, SEC: 0. 3. 19.

START-UP AND SHUT-DOWN:

10 START-UP TIME, SEC: 120.  
 11 SHUT-DOWN TIME, SEC: .5

VIBRATION LIMITS (P-P):

12 DISPLACEMENT, IN: 5000.  
 13 VELOCITY, IN/SEC: 9999.  
 14 ACCELERATION, G: 450.

REFERENCE CONTROL SPECTRUM:

|                                    |    |     |     |    |
|------------------------------------|----|-----|-----|----|
| 15 TYPE, VALUE, FREQ, ABORT LIMIT: | 2. | 40. | 0.5 | 7. |
| 16 TYPE, VALUE, FREQ, ABORT LIMIT: |    | 60. | 1.3 | 4. |
| 17 TYPE, VALUE, FREQ, ABORT LIMIT: | 2. | 60. | 50. | 4. |
| 18 TEST LEVEL (DB BELOW REF):      | 6. |     |     |    |

ACCELERATION SIGNALS:

19 NR OF SIGNALS: 2.  
 CHANNEL NRS: 1. 2.  
 20 1=PEAK, 0=RMS: 0.  
 21 SENSITIVITY, MV/G: 20.  
 22 STRATEGY 1=MAX, 0=AVG: 1.

LIMIT SIGNALS:

23 NR OF SIGNALS: 0.

ABORT LINES:

24 NR OF LINES: 0.

ALARM LINES:

25 NR OF LINES: 0.  
 26 1=DUAL-CHANNEL A/D, 0=ACE: 1.  
 27 COMPRESSION SPEED 2=HIGH, 1=NORMAL, 0=LOW: 1.

## POST-TEST DOCUMENTATION

TRAIN TRACK TRANSFER 4510 LB TEST 3/19/75

COMPLETION STATUS: ABORTED DURING SWEEP 1 AT 26.68 HZ.  
CONTROL LIMITS EXCEEDED.

TEST DURATION -- HRS, MIN, SEC: 0 2 52

MAX ABS CONTROL ERROR: 4.31 DB AT 26.63 HZ.  
AVG ABS CONTROL ERROR: .1342 DB.CONTROL  
CHANNEL FREQ RANGE (HZ)

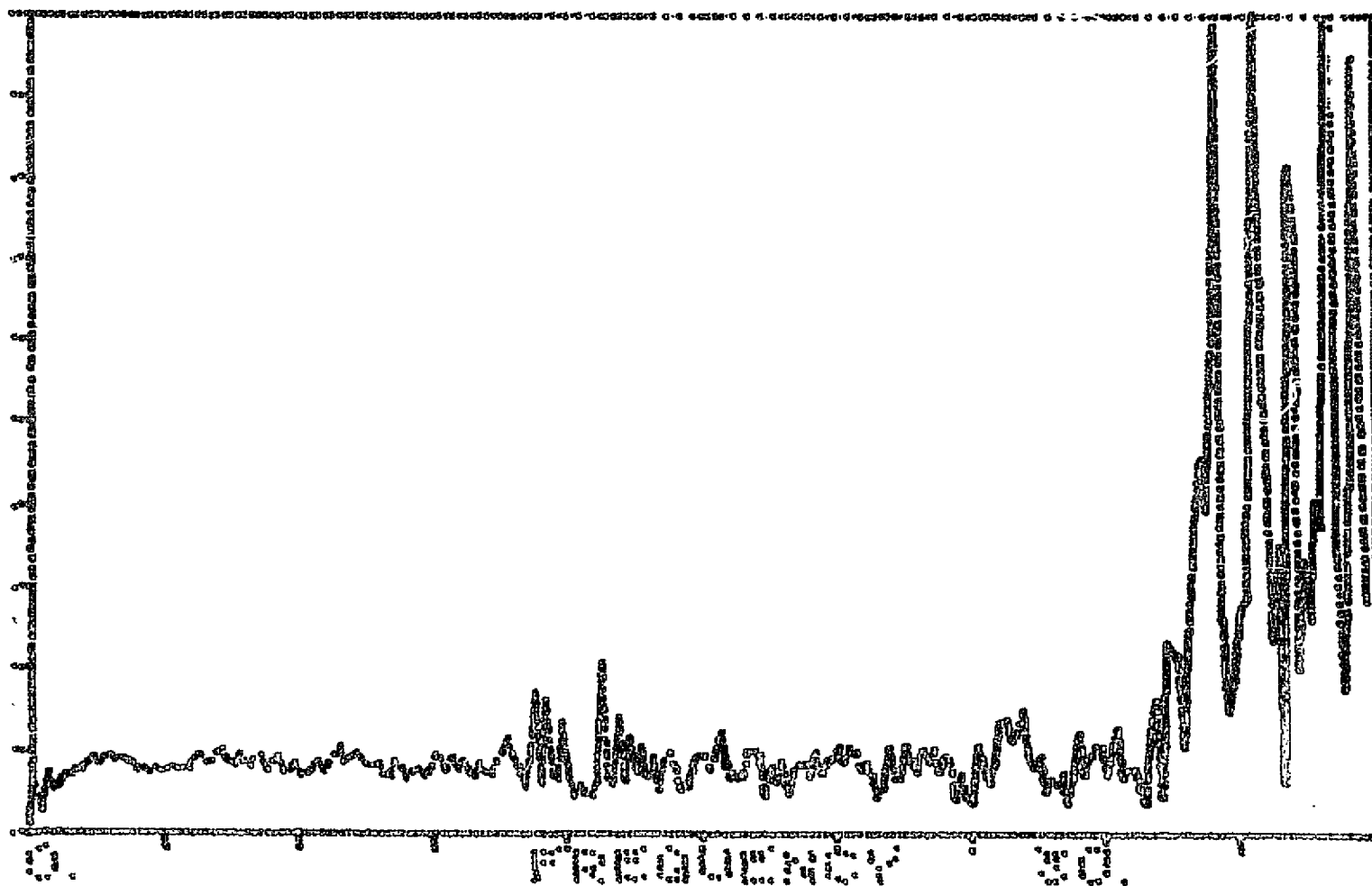
SWEEP 1

|   |       |    |       |
|---|-------|----|-------|
| 2 | .5    | -- | .904  |
| 1 | .904  | -- | 1.758 |
| 2 | 1.758 | -- | 4.021 |
| 1 | 4.021 | -- | 6.083 |
| 2 | 6.083 | -- | 26.63 |
| 1 | 26.63 | -- | 26.68 |

0.00

0.00

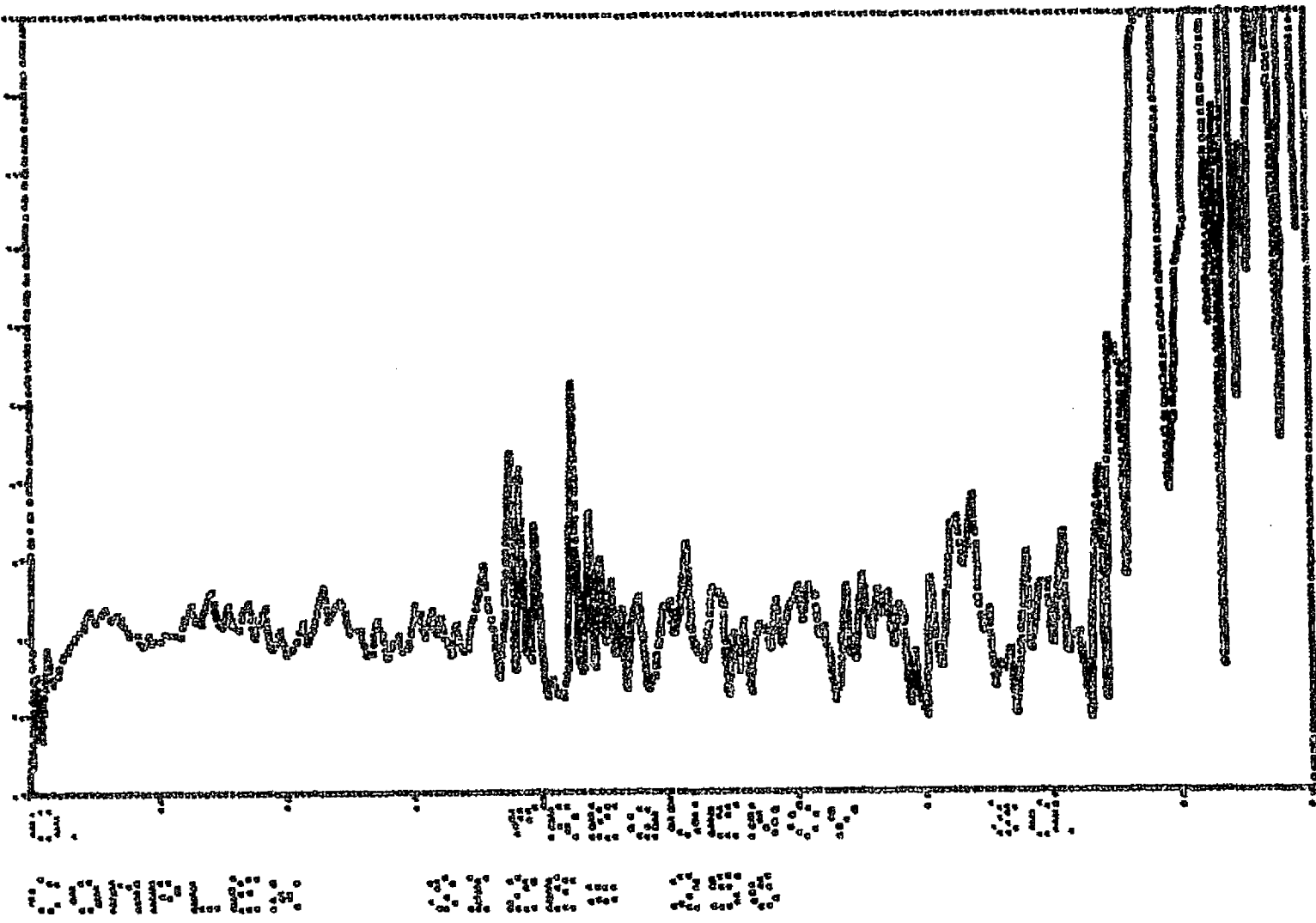
0.00



COMPLEX

SIZE: 256

FL1/DRIVE



1

1000

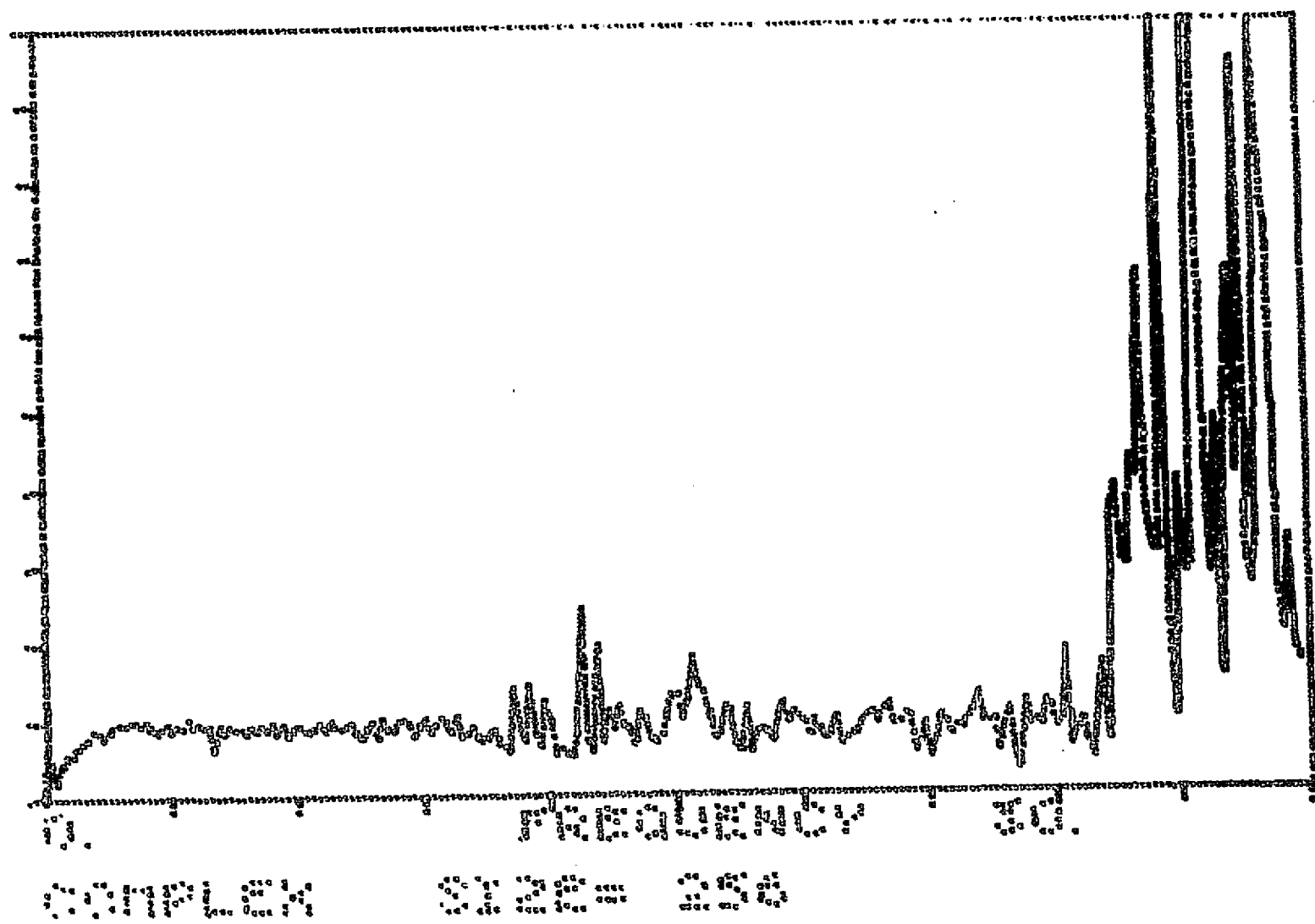
1



1000

1000

1000

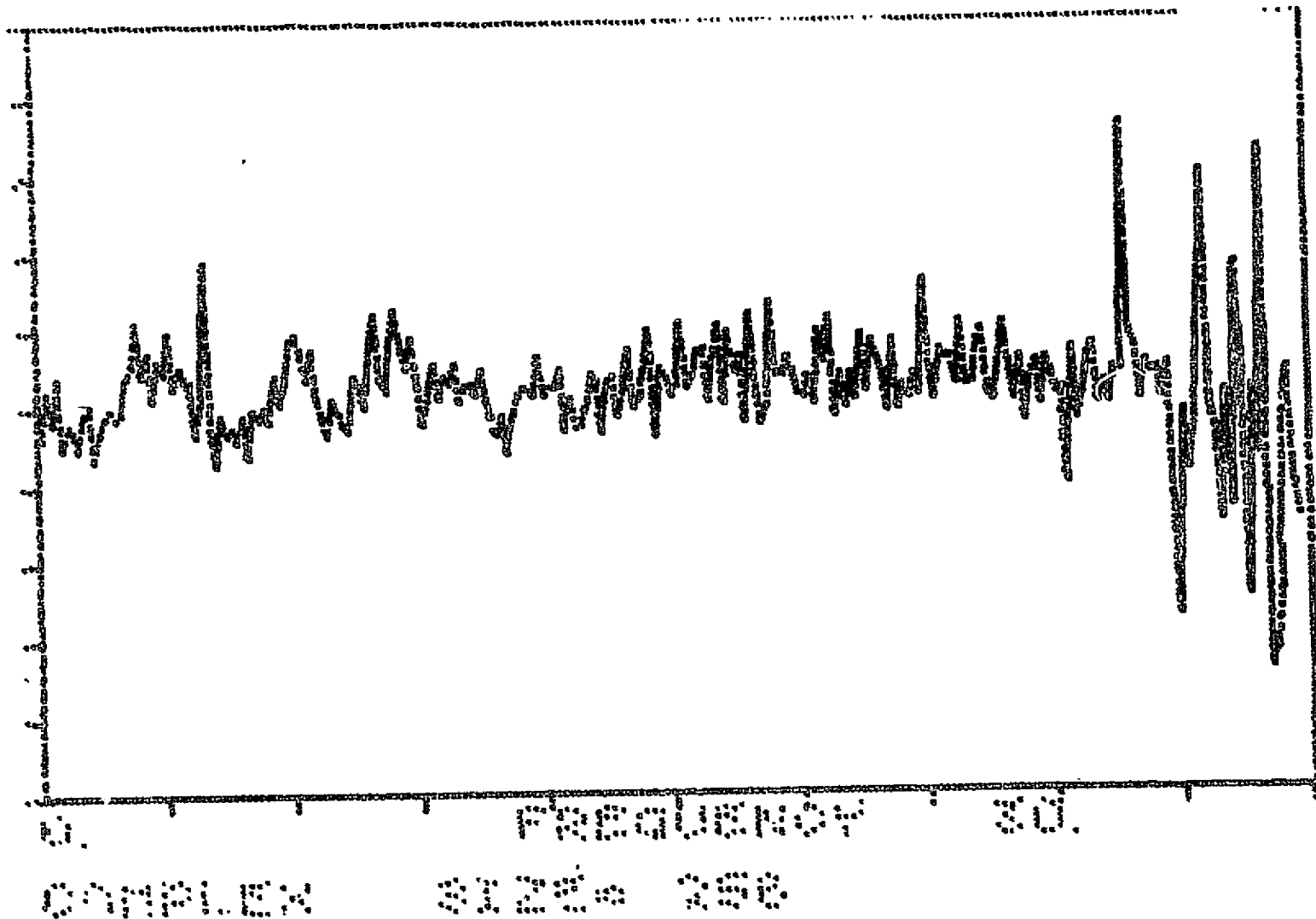


FL2/DRIVE

2.

1000

0.

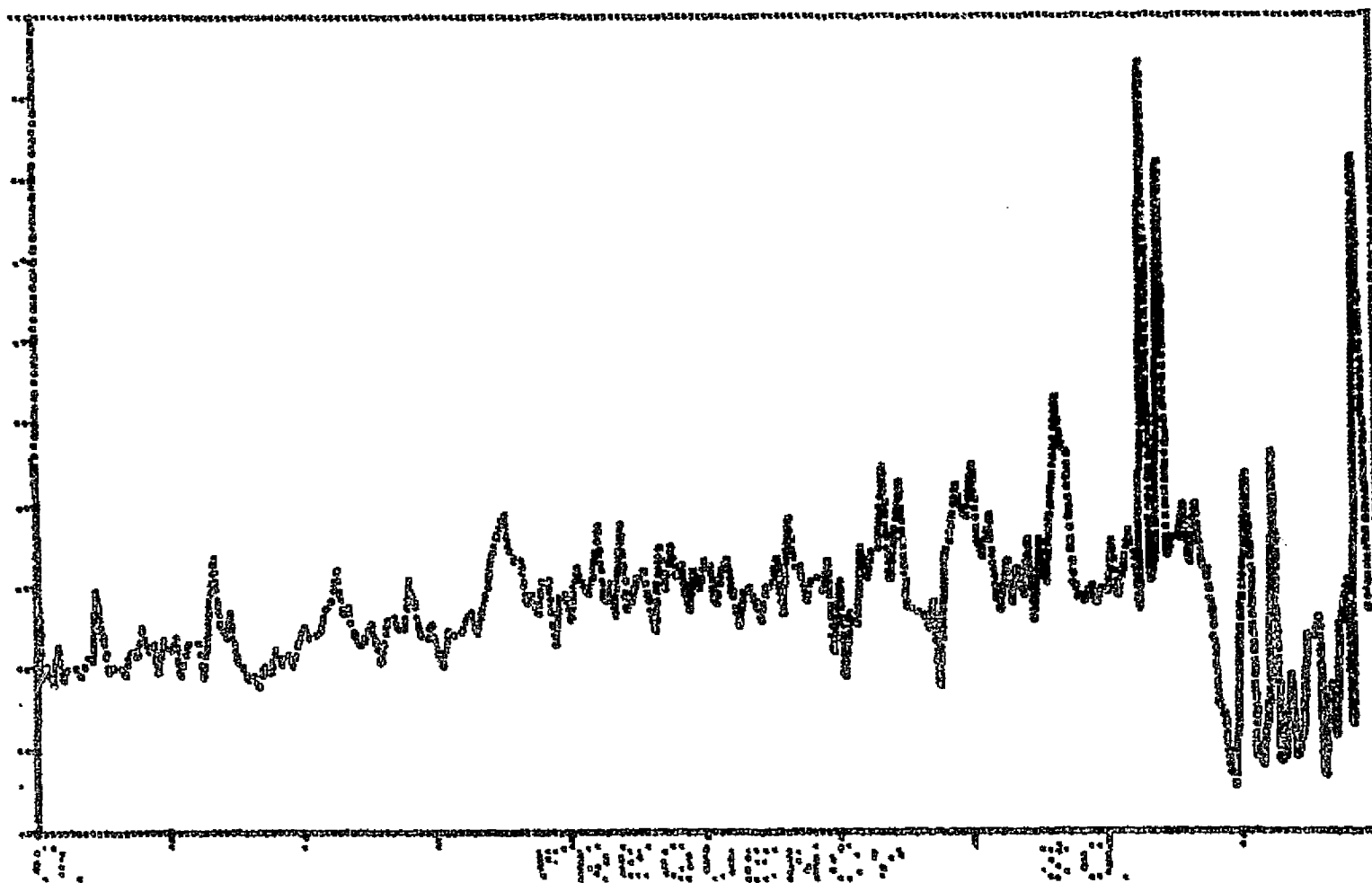


FL2/FL1

2.

mag

0.



COMPLEX

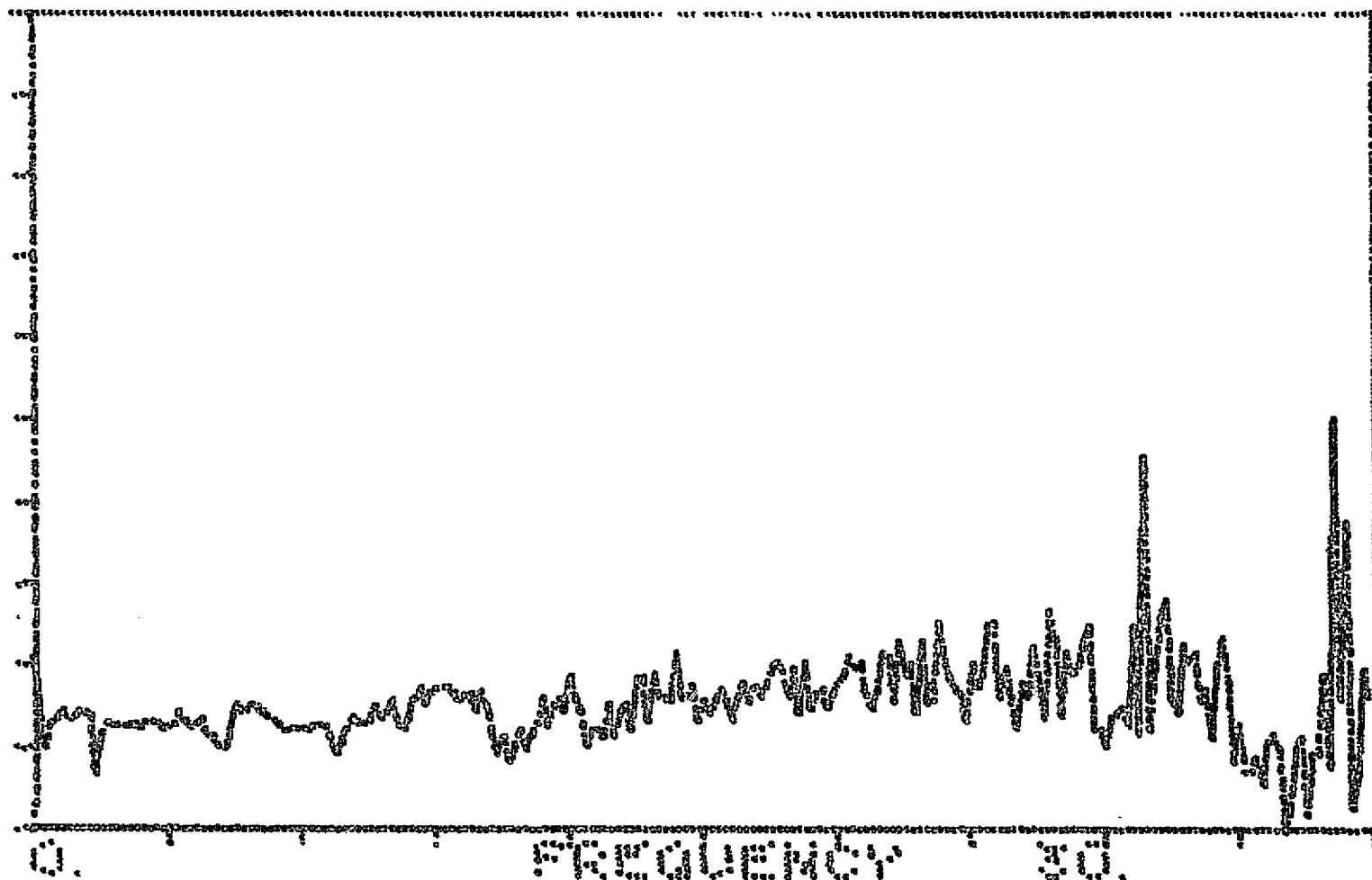
SIZE = 256

FV2/FL1

g.

1404

a.



COMPLEX

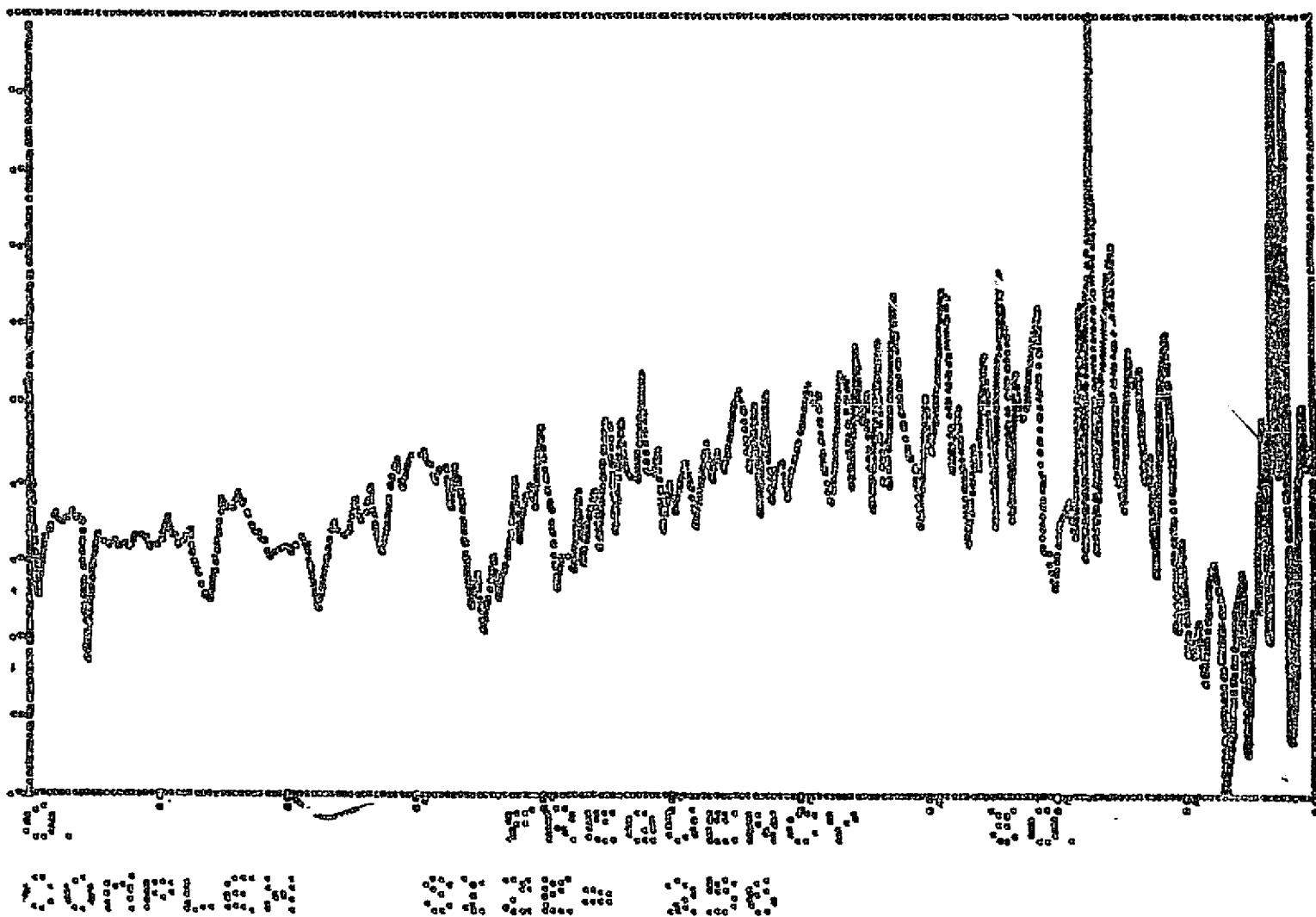
01234 256

FV3/FL1

2

7503

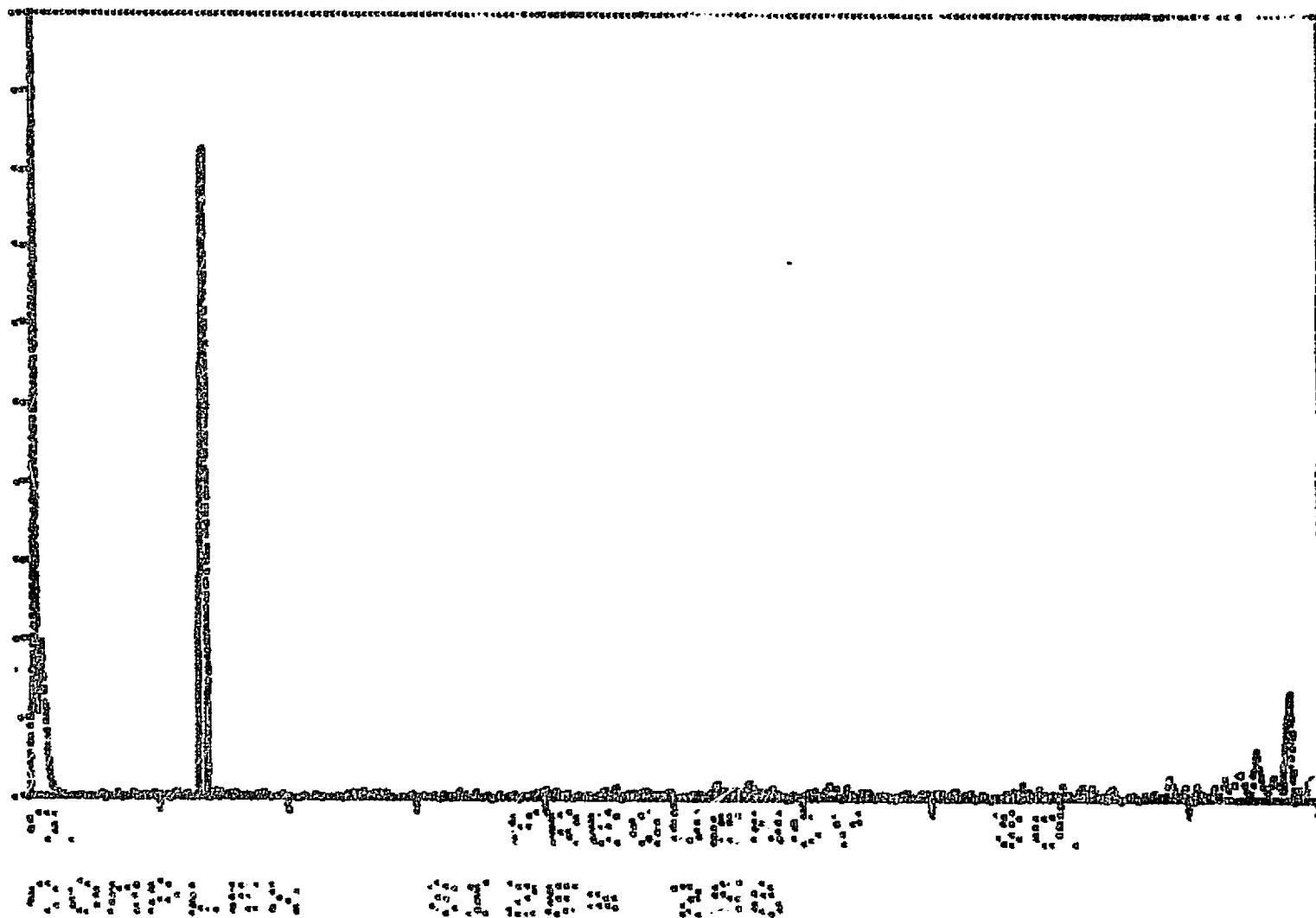
2



1.

1994

0.



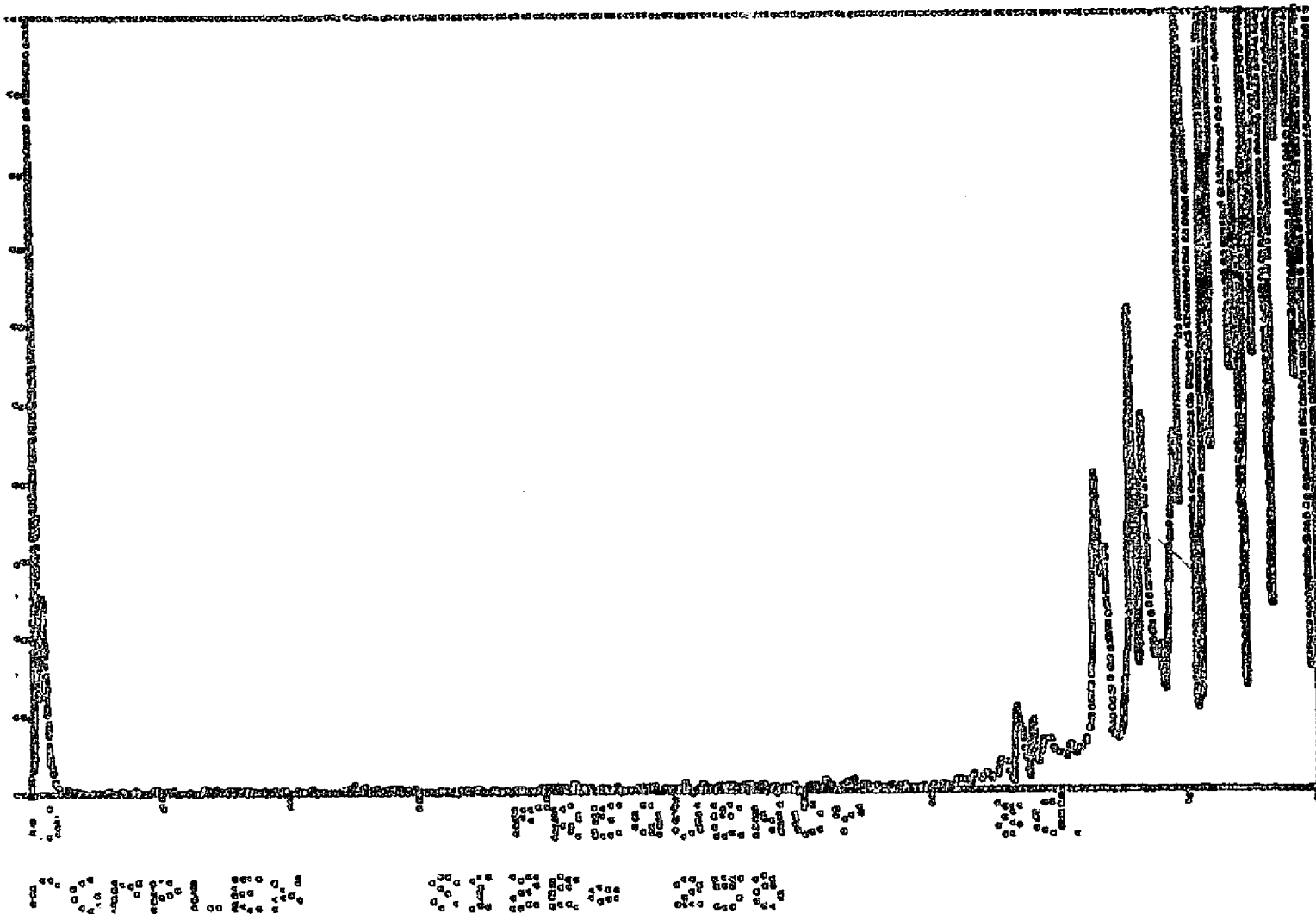
DVI/FL1



1

1993

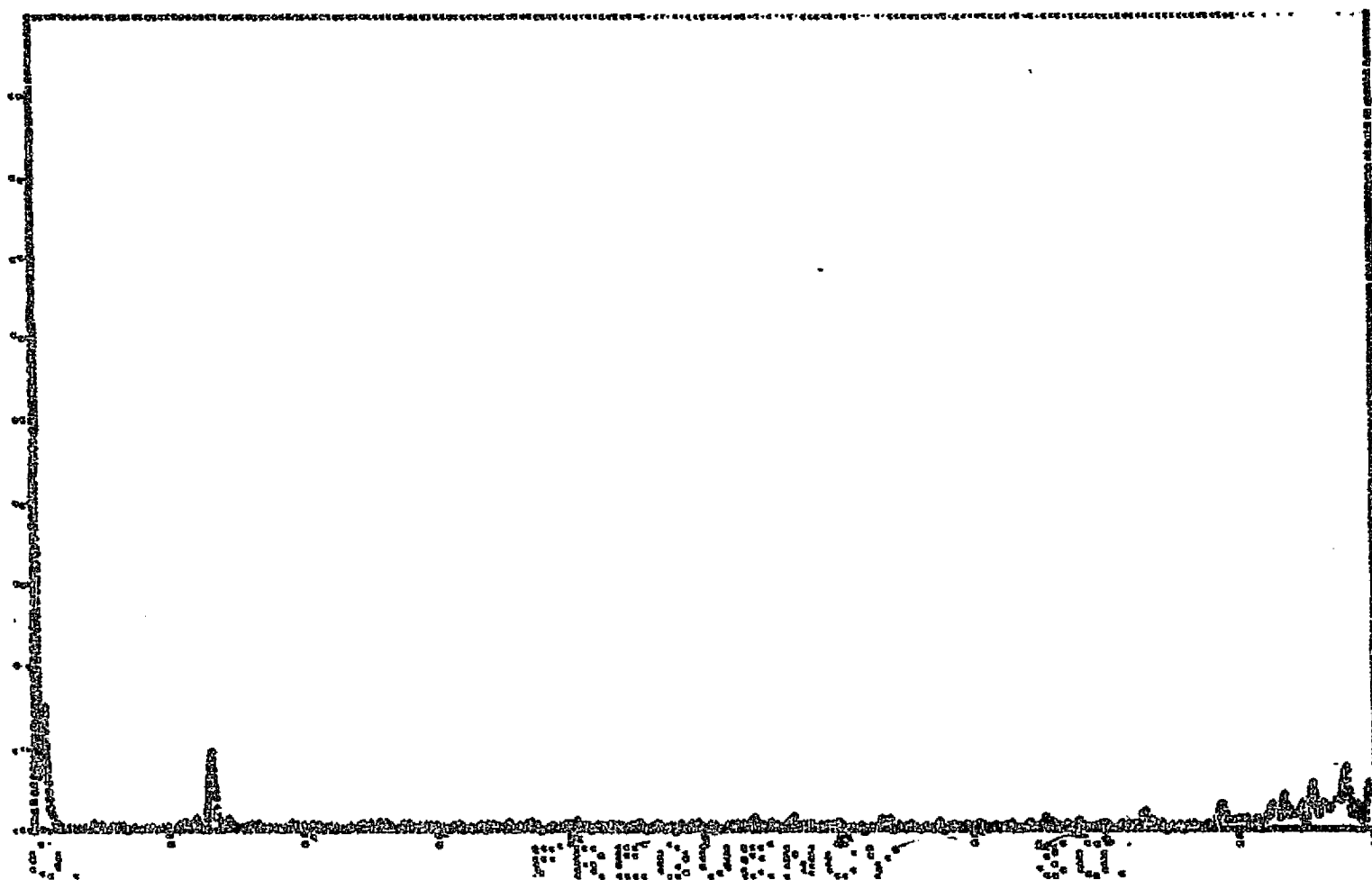
2



1.

1984

0.



Complex

22.25 GHz

DV1/FL1

4.

1954

10.

COMPLEX

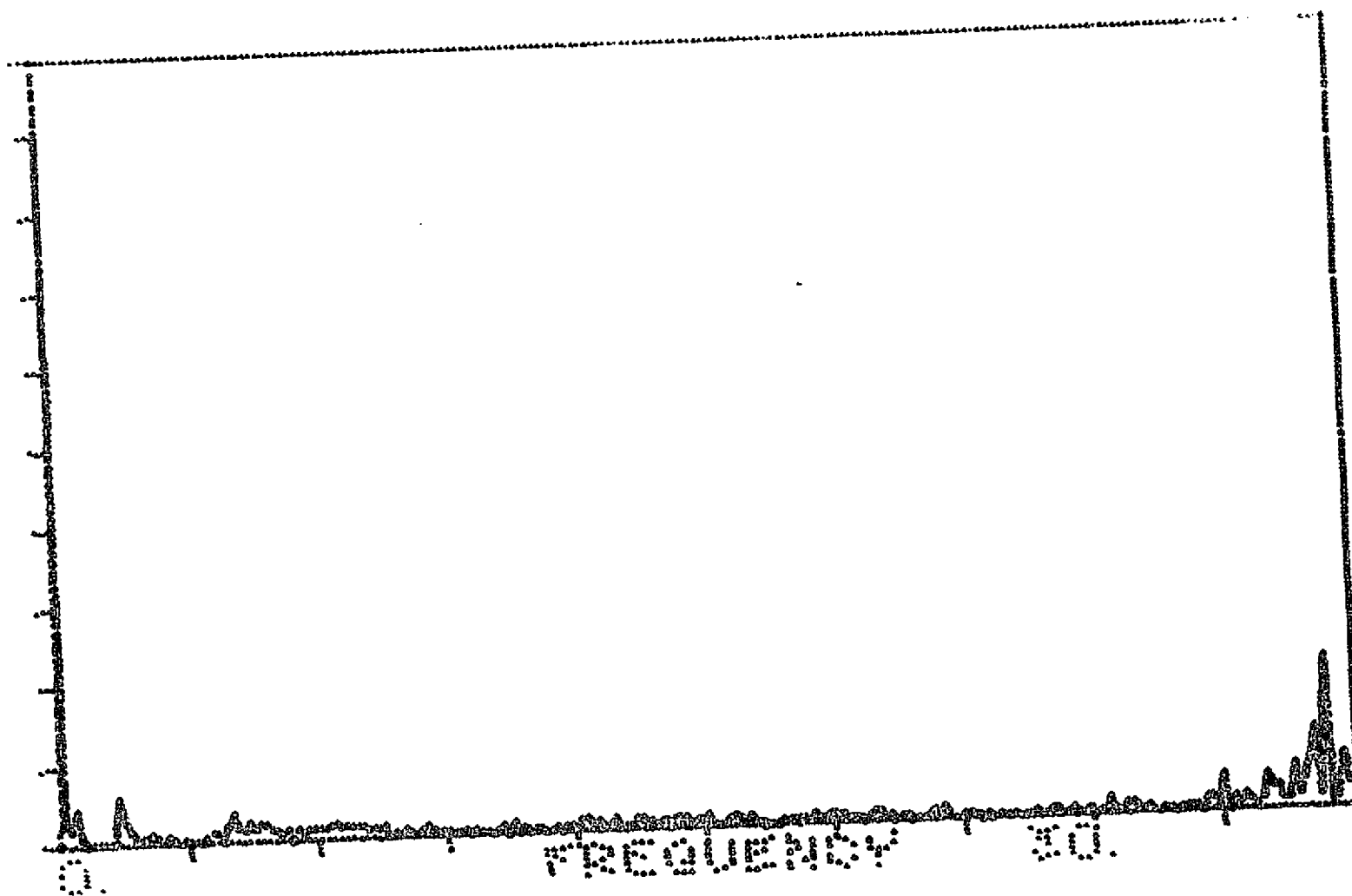
SIZE 255

DV2/FL1

1.

mach

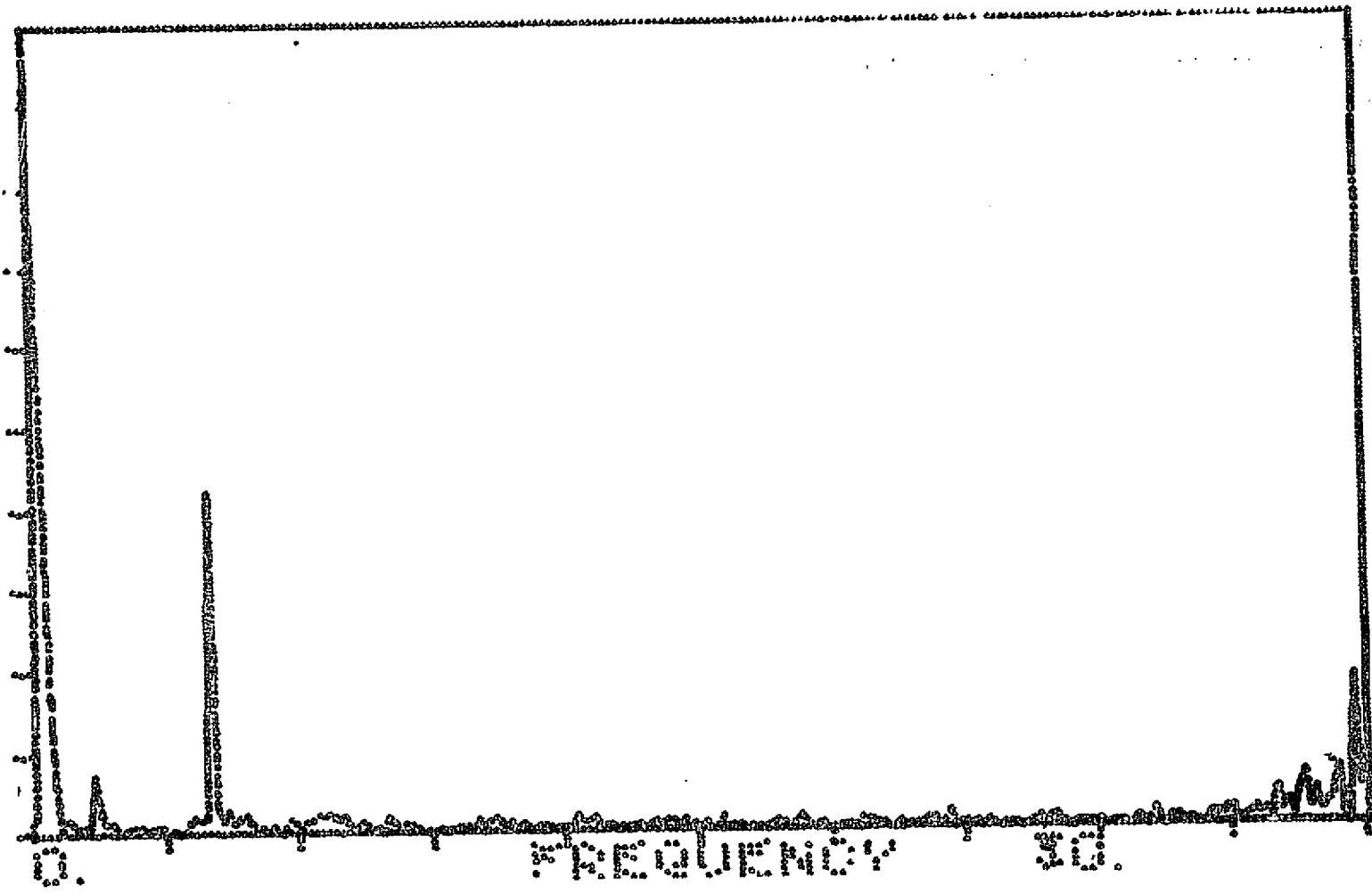
0.



169

complex size 255

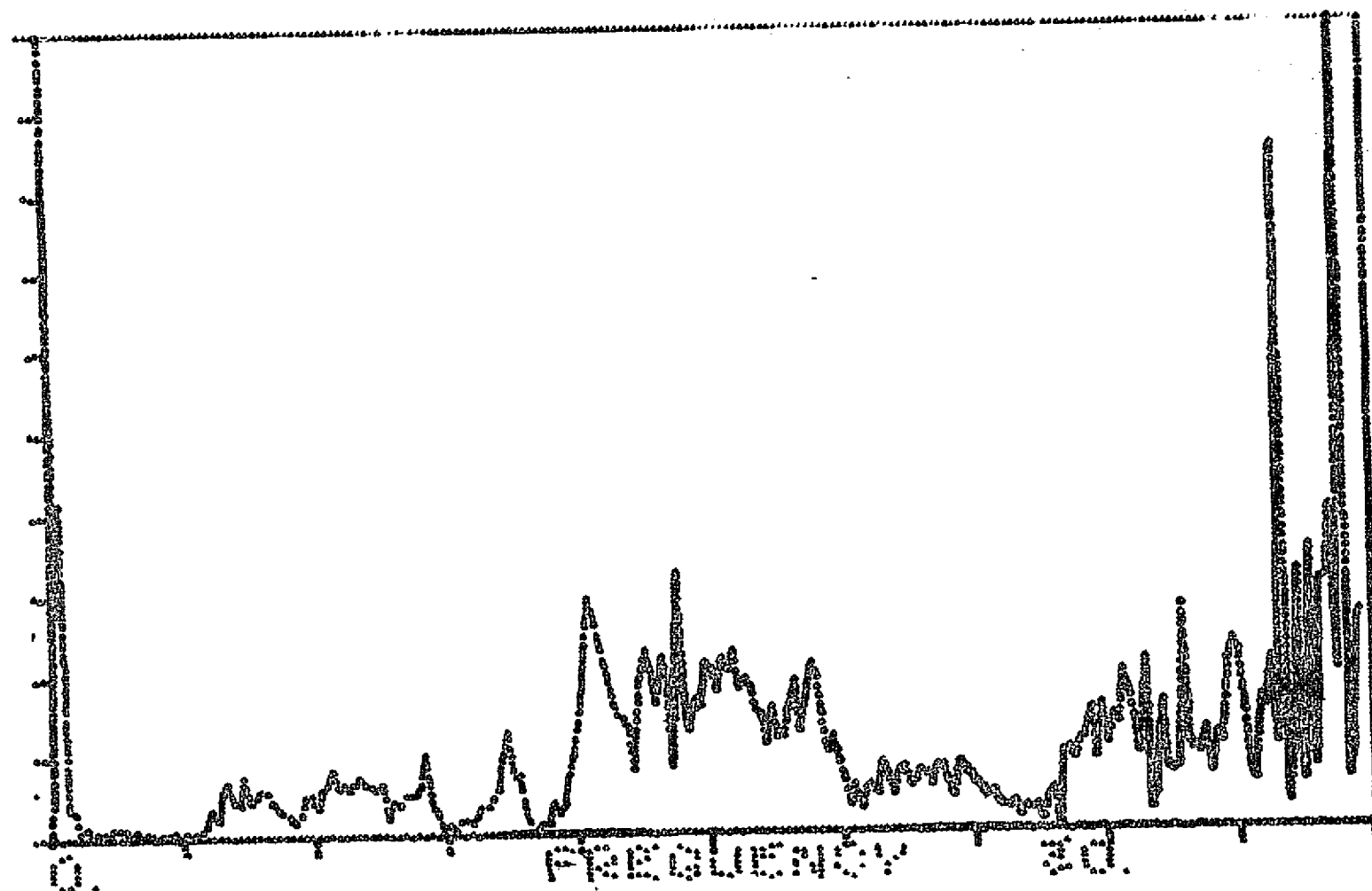
DV3/FL1



COMPLEX

SIZE: 256

DV4/FL1

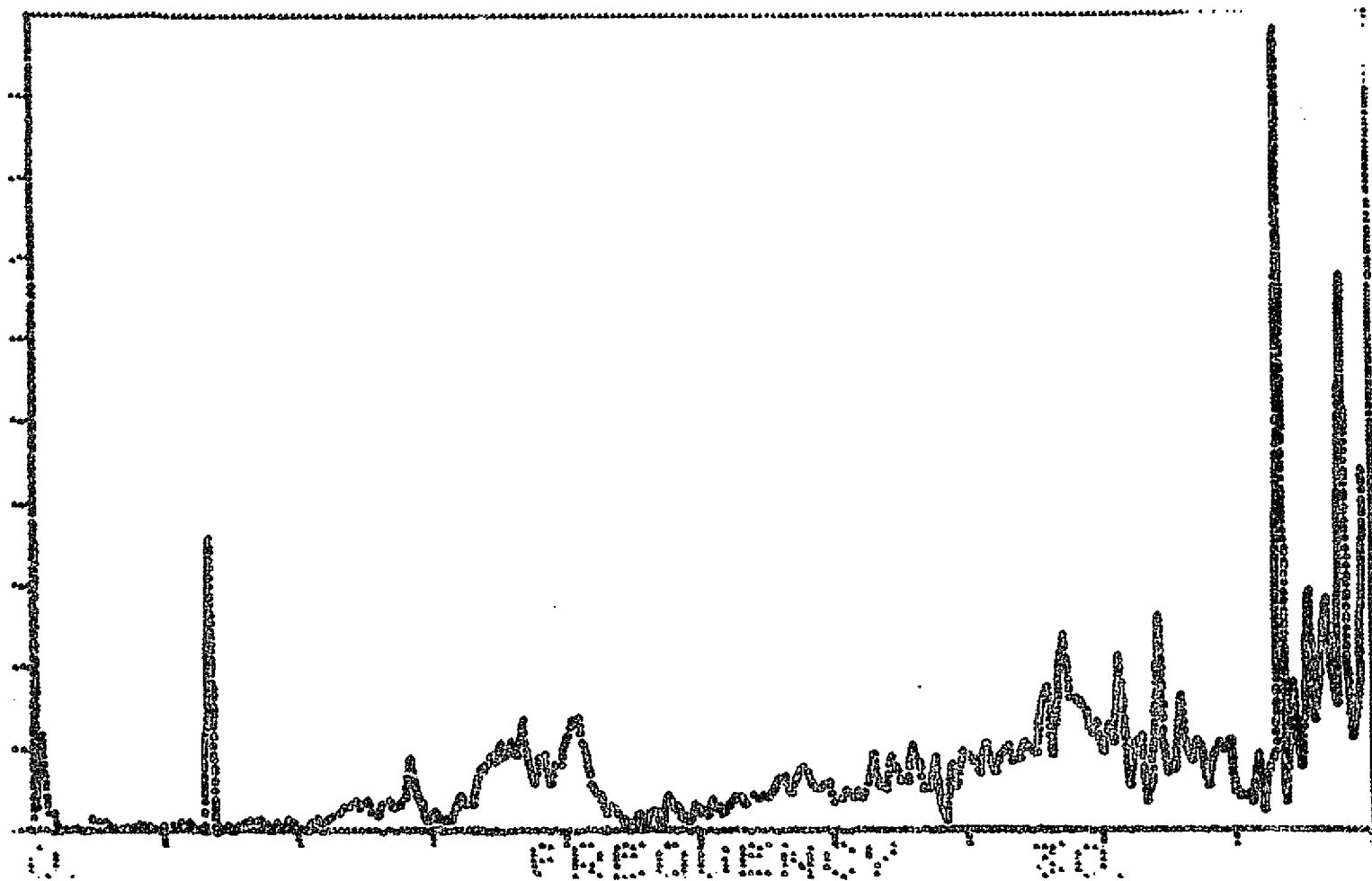


COMPLEX SIZE 256

AV1/FL1



1. HAOA



00000000

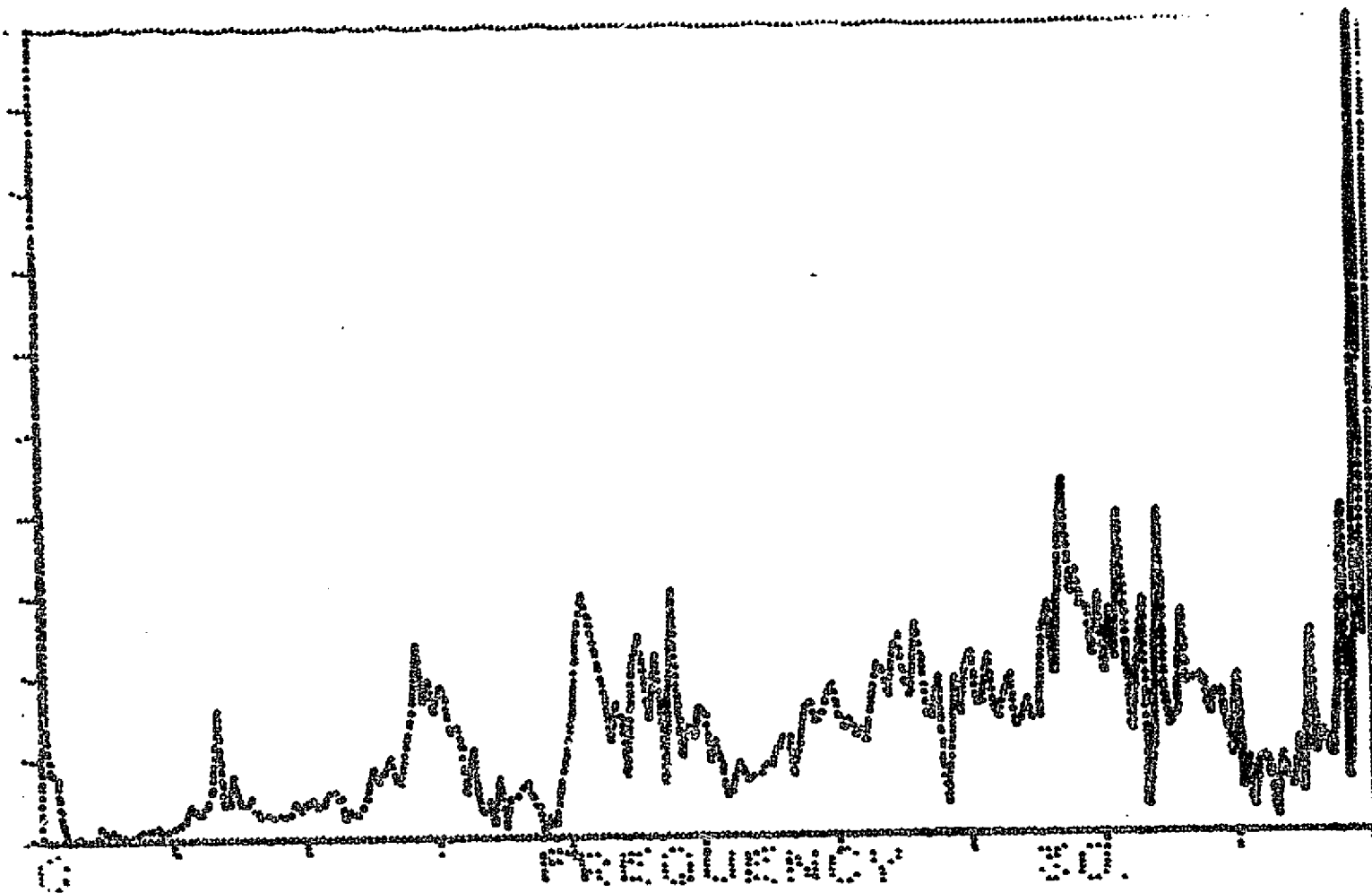
00000000

AV2/FL1

1.

mag

0.



COMPLEX

SIZE 256

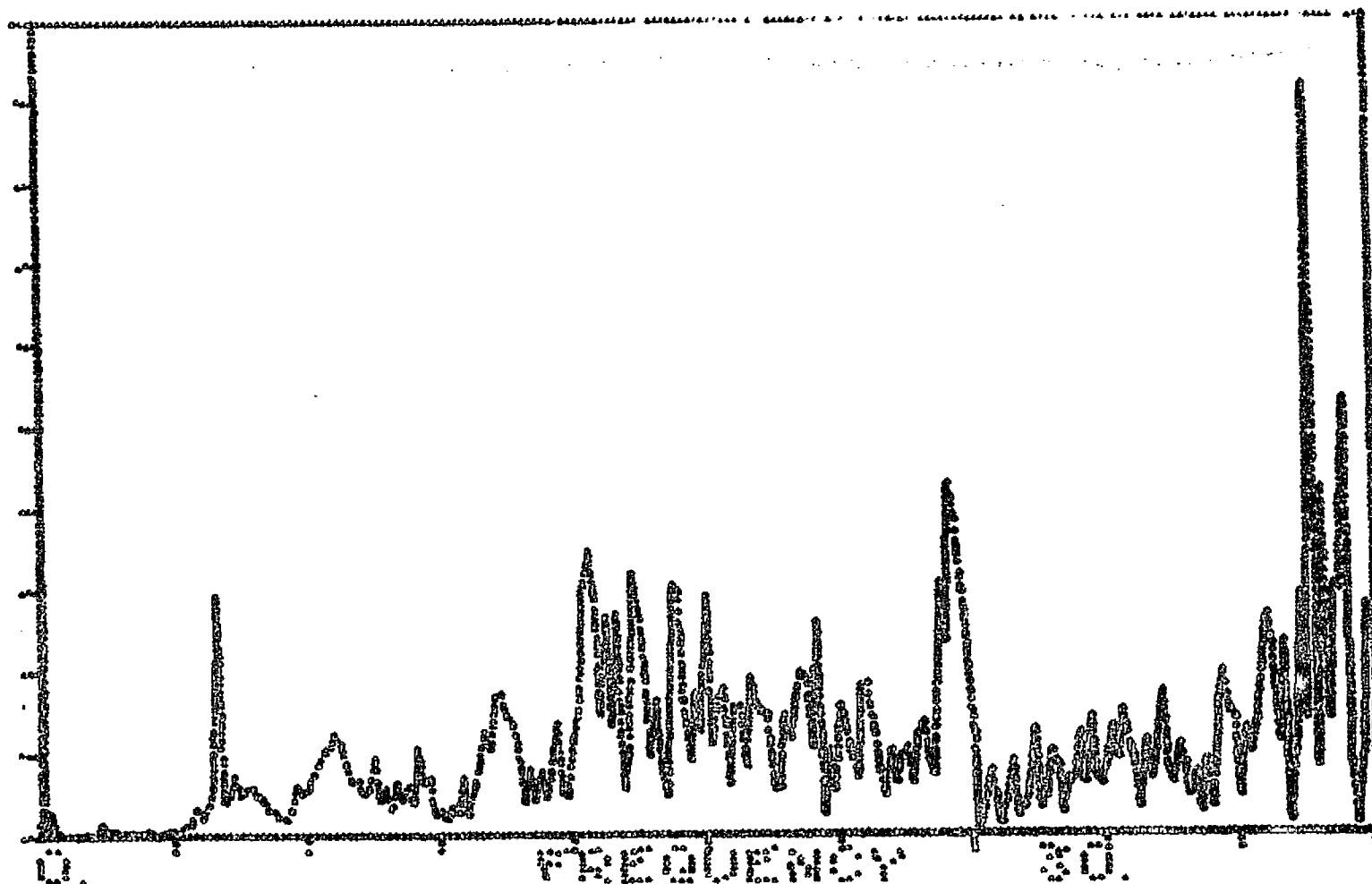
256

AV3/FL1

4.

mpg

0.



COMPLEX:

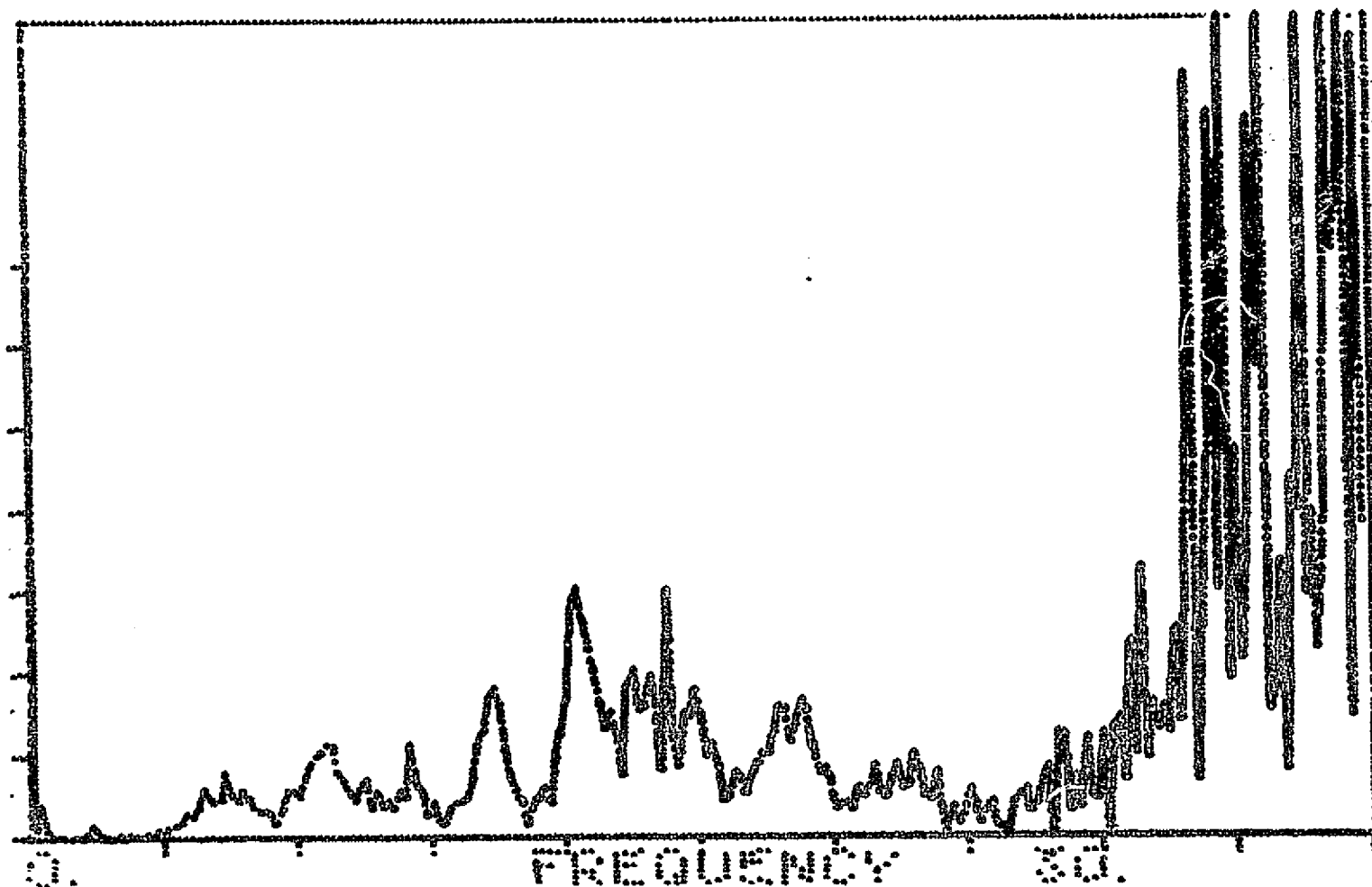
SIZE = 256

AV4/FL1

1.

1968

2.



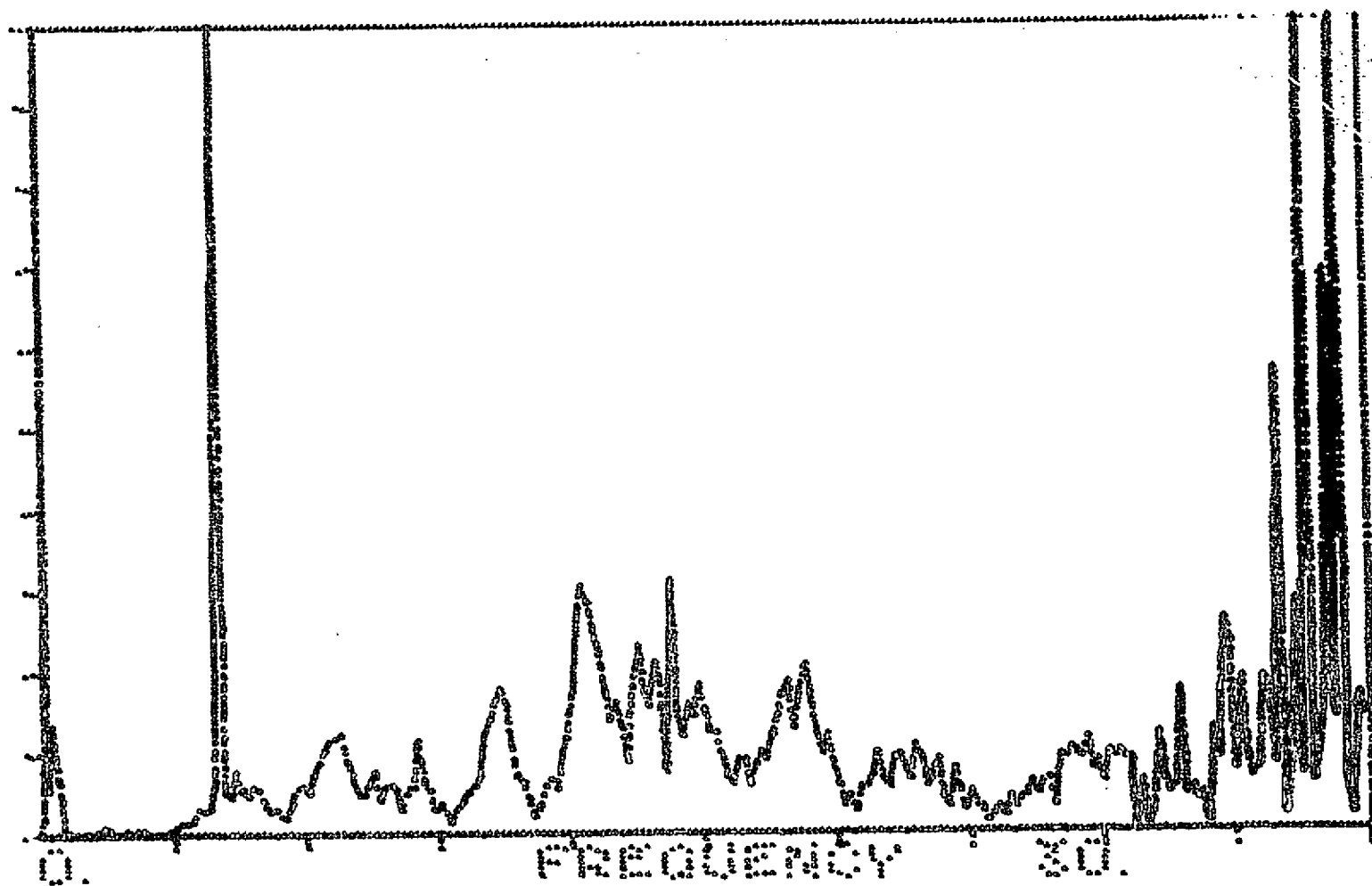
COMPLEX

SIZE= 256

4.

1962

0.



COMPLEX

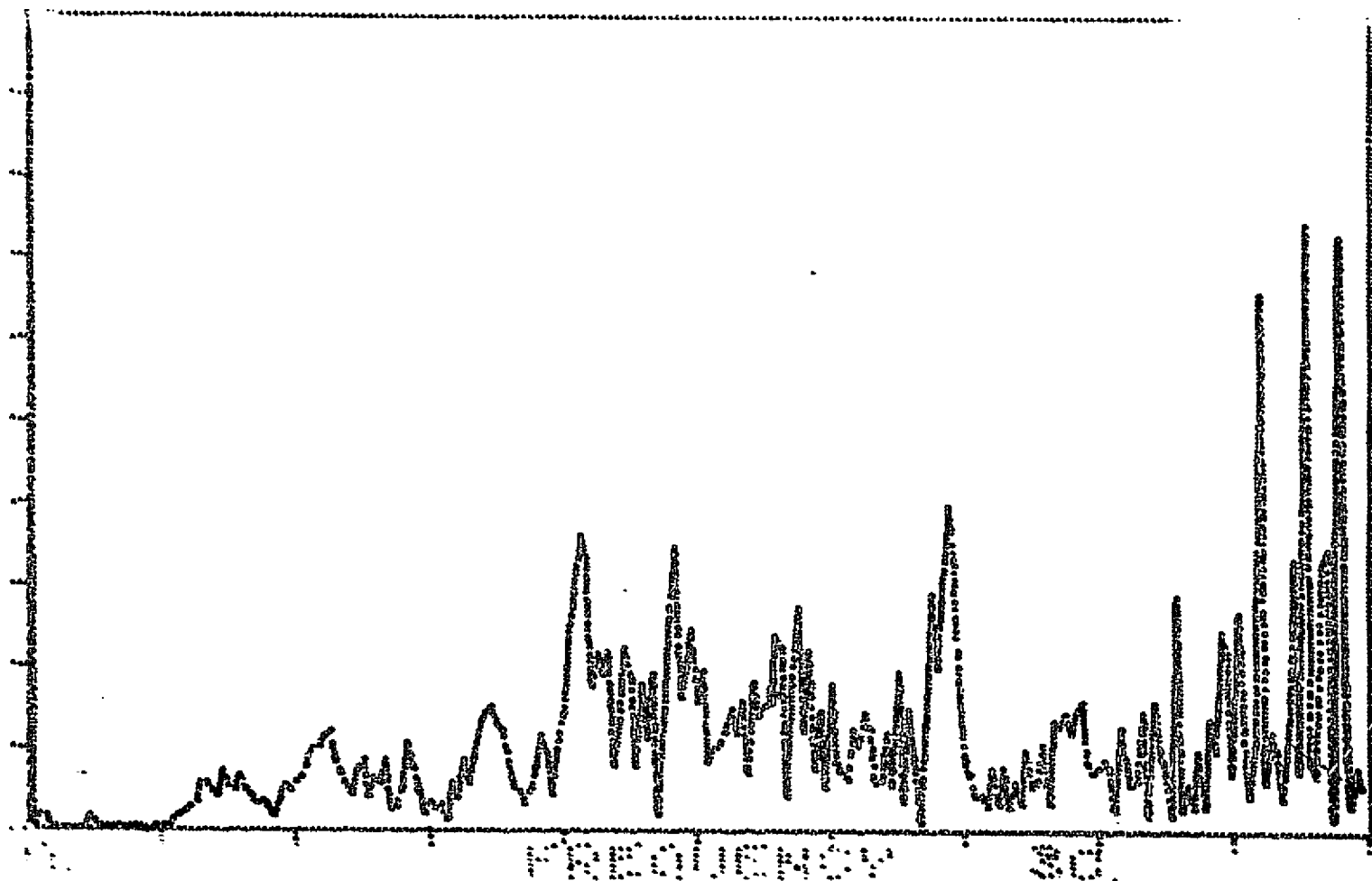
SIZE = 255

AV4/FL1

1.

mag

0.



COMPLEX

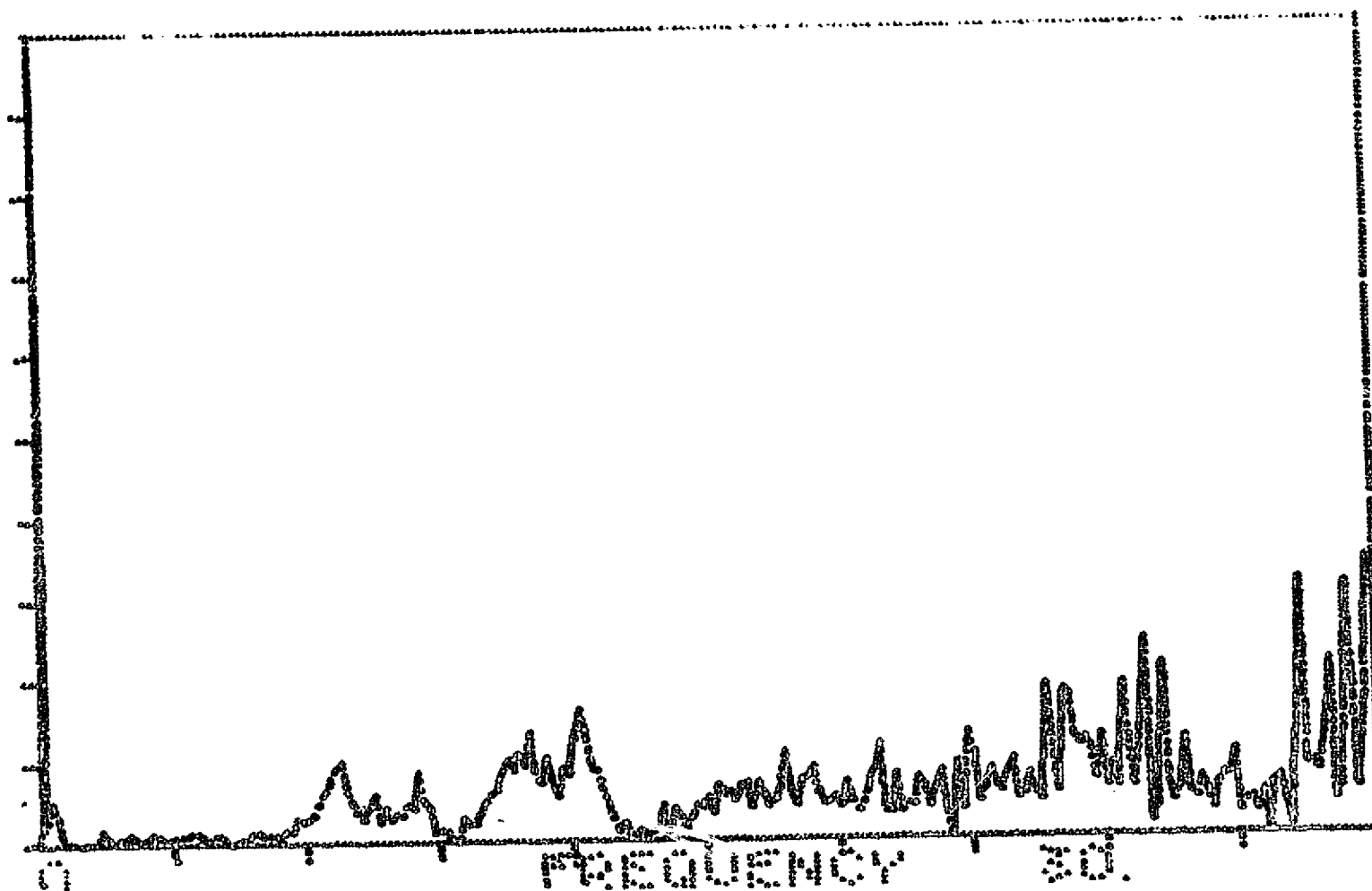
8122



A.

1964

Q.



COMPLEX

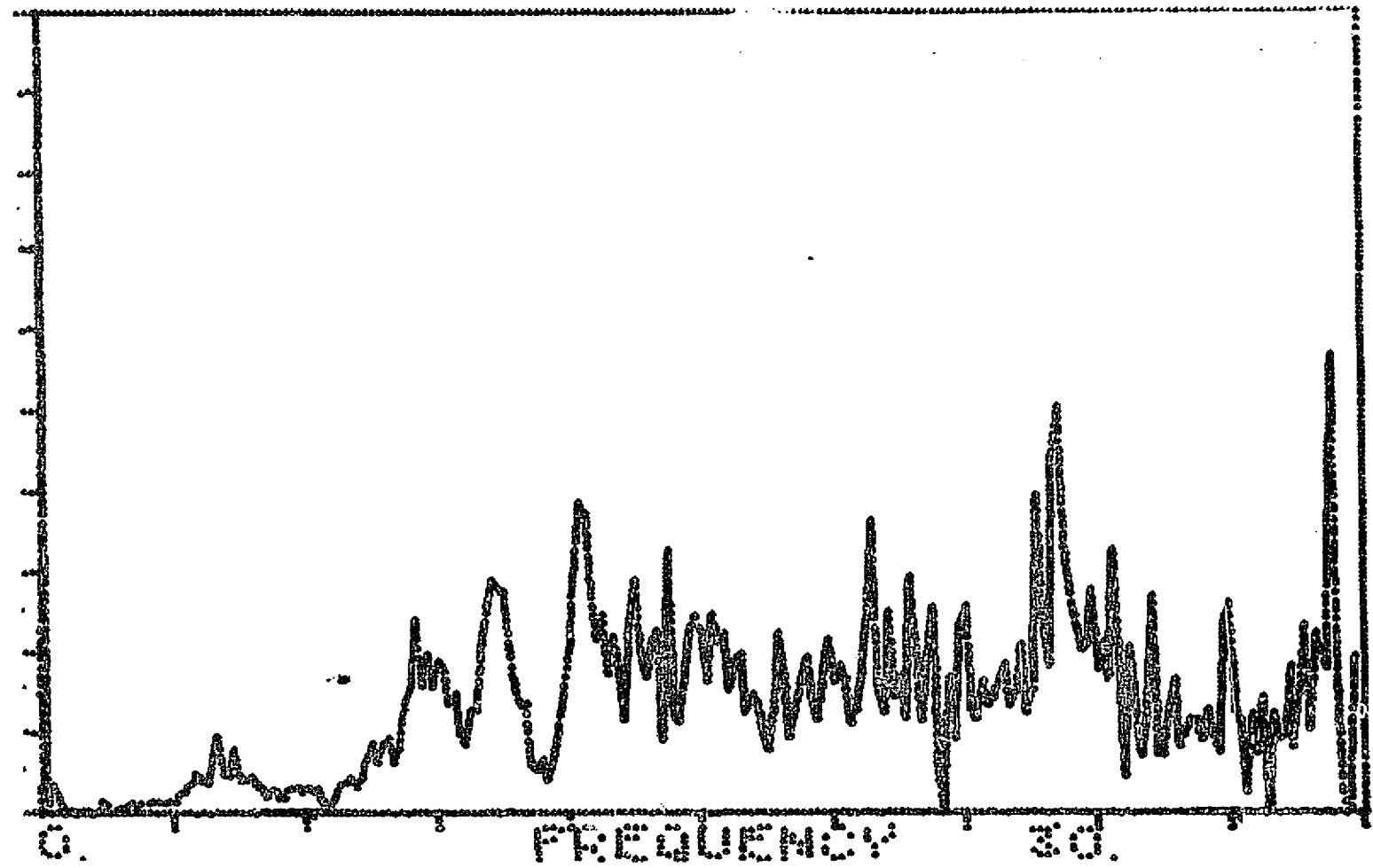
SIZE 256

AV5/FL1

1.

hash

0.



COMPLEX

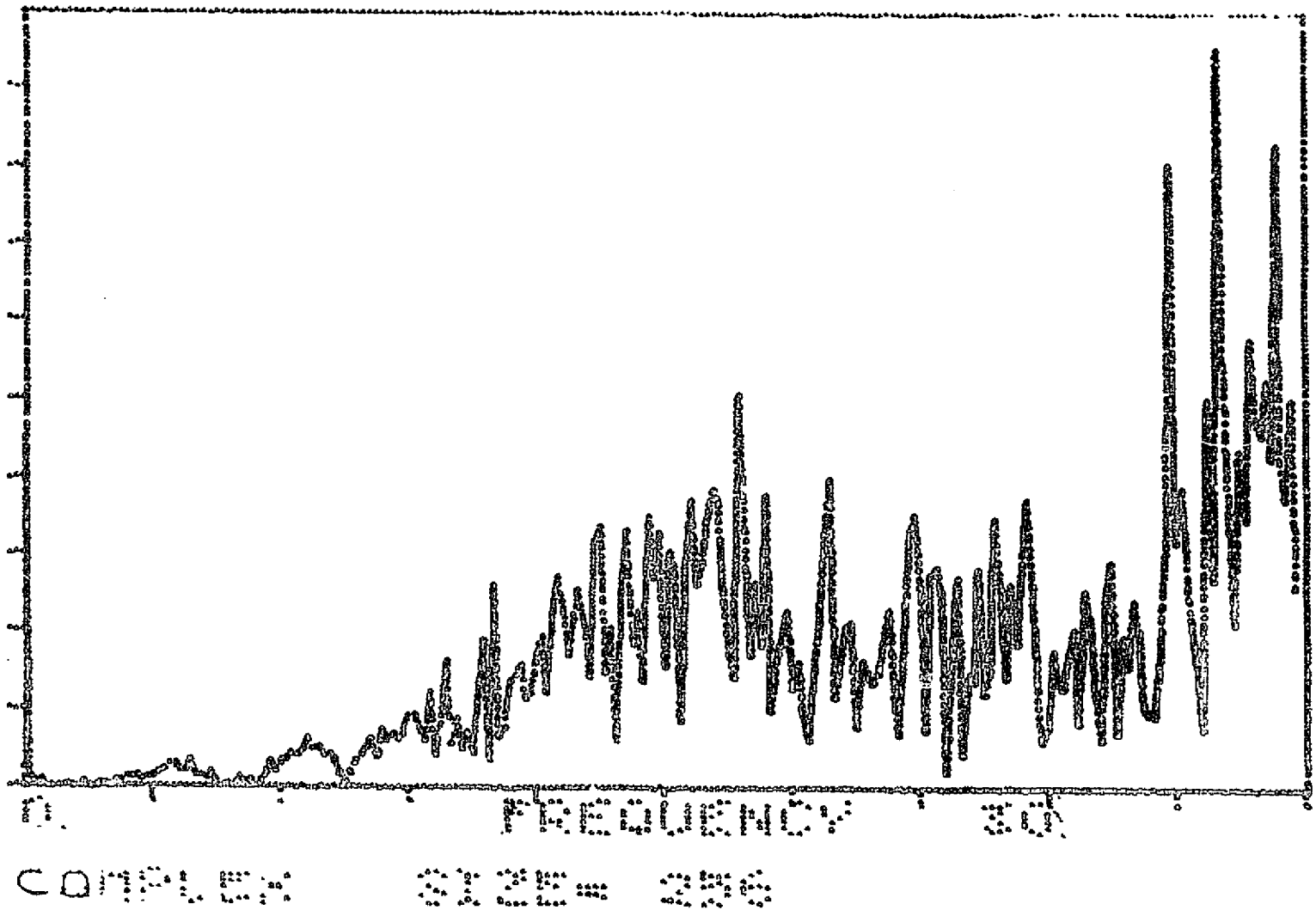
SIZE= 256

AV6/FL1

2.

mag

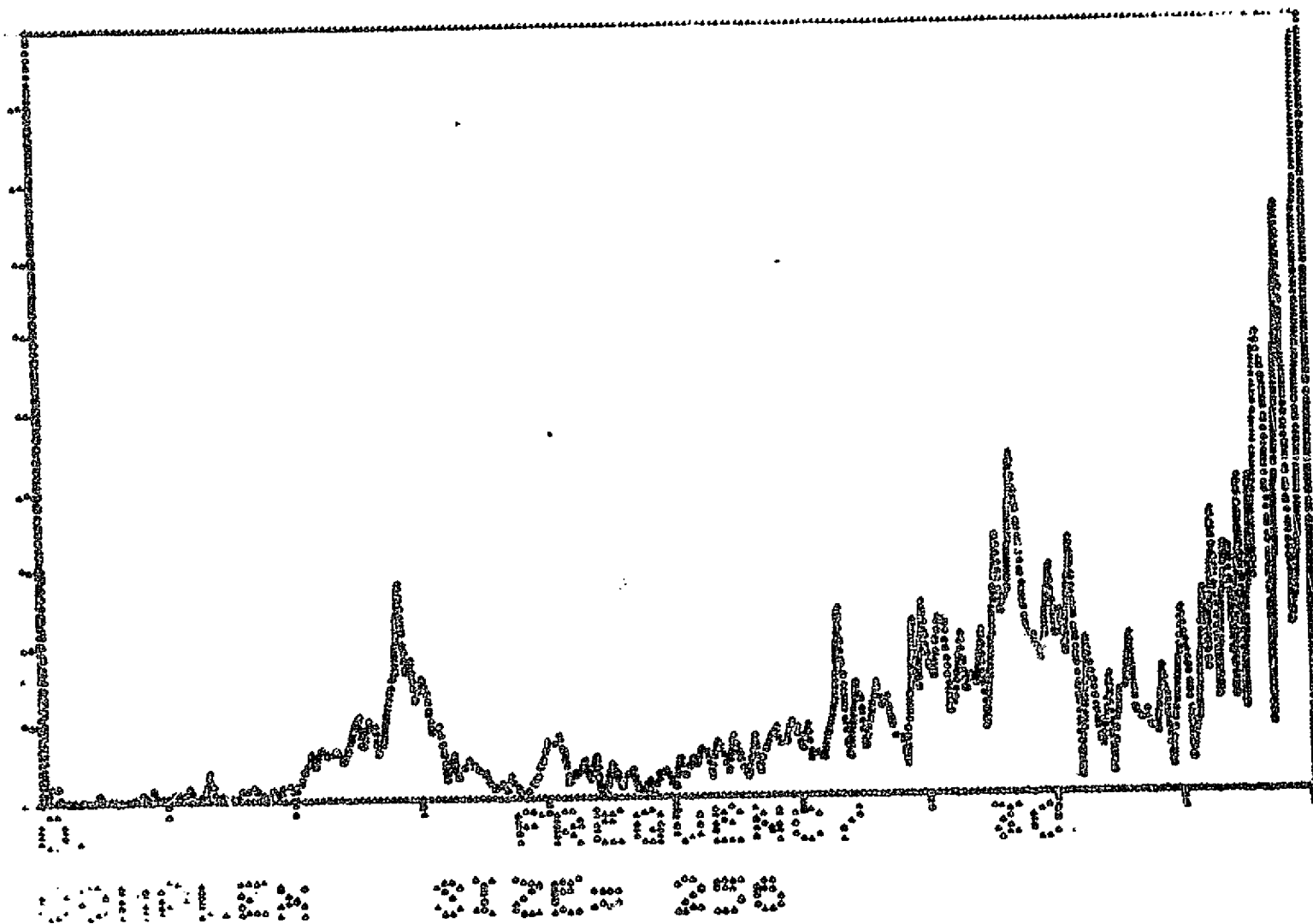
D.



ALI/FL1

ॐ नमो भगवते वासुदेवाय  
 ॐ नमो भगवते वासुदेवाय  
 ॐ नमो भगवते वासुदेवाय  
 ॐ नमो भगवते वासुदेवाय  
 ॐ नमो भगवते वासुदेवाय

○

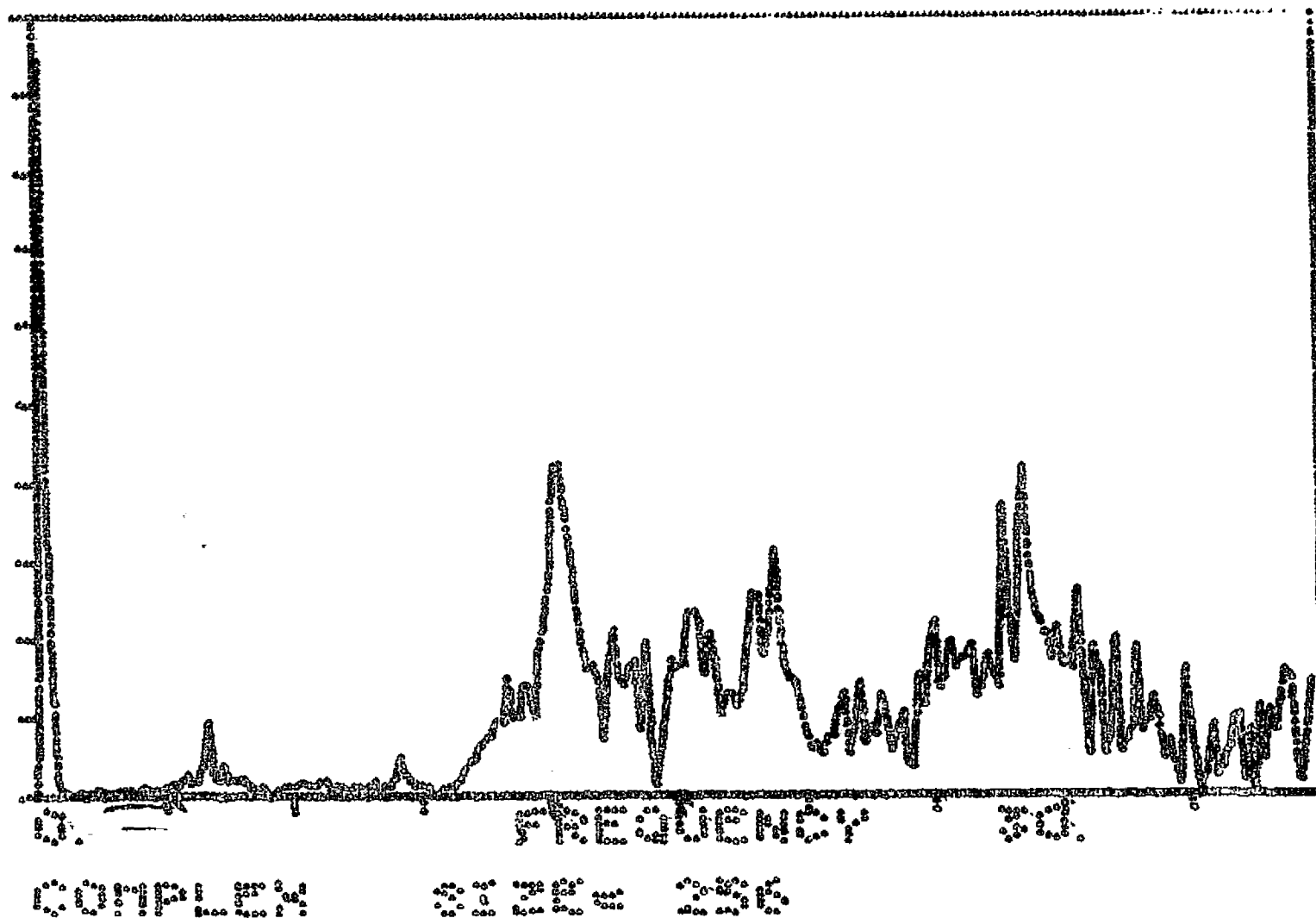


AL2/FL1

4.

182

0.



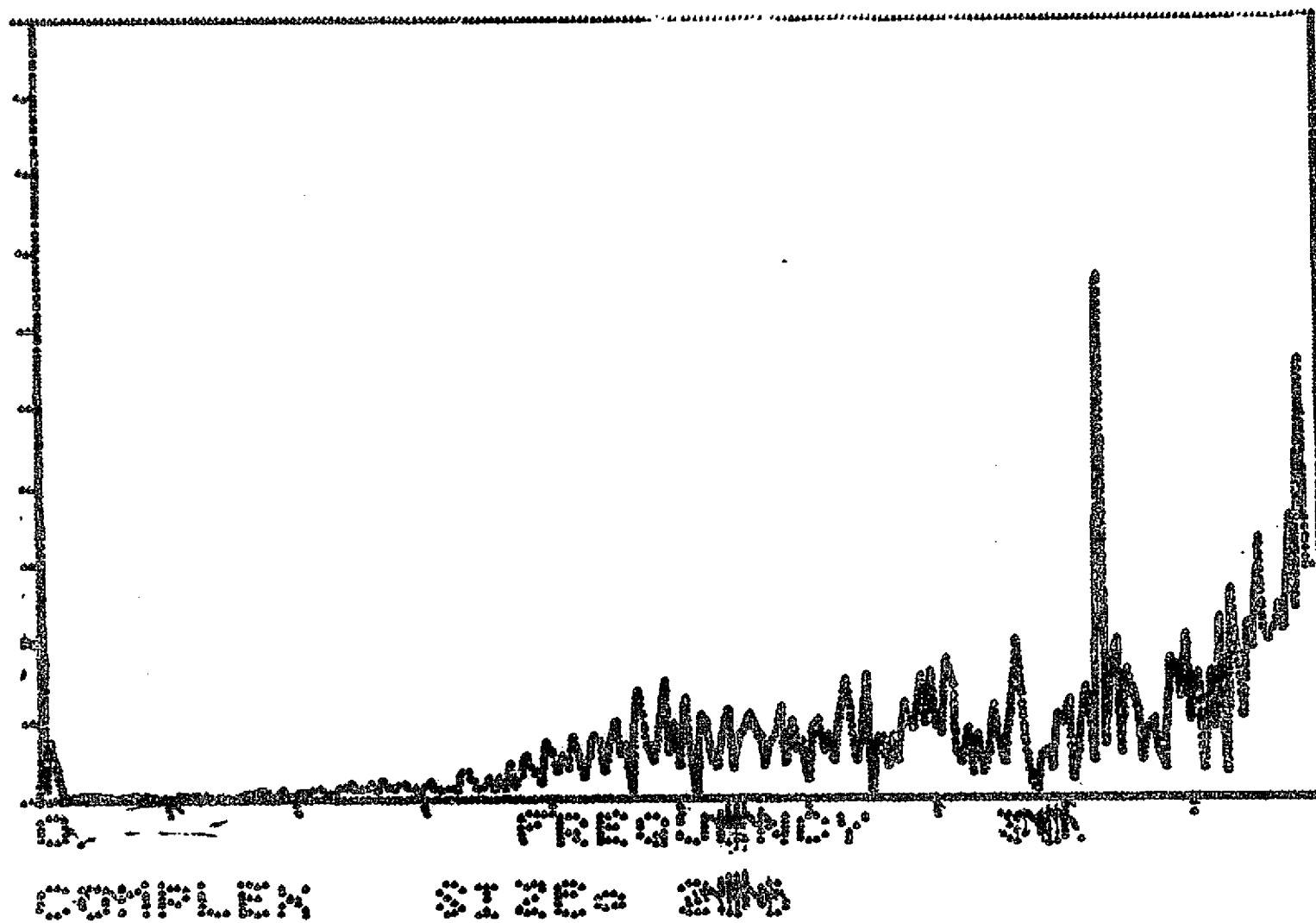
182

AL3/FL1

20.

max

0.

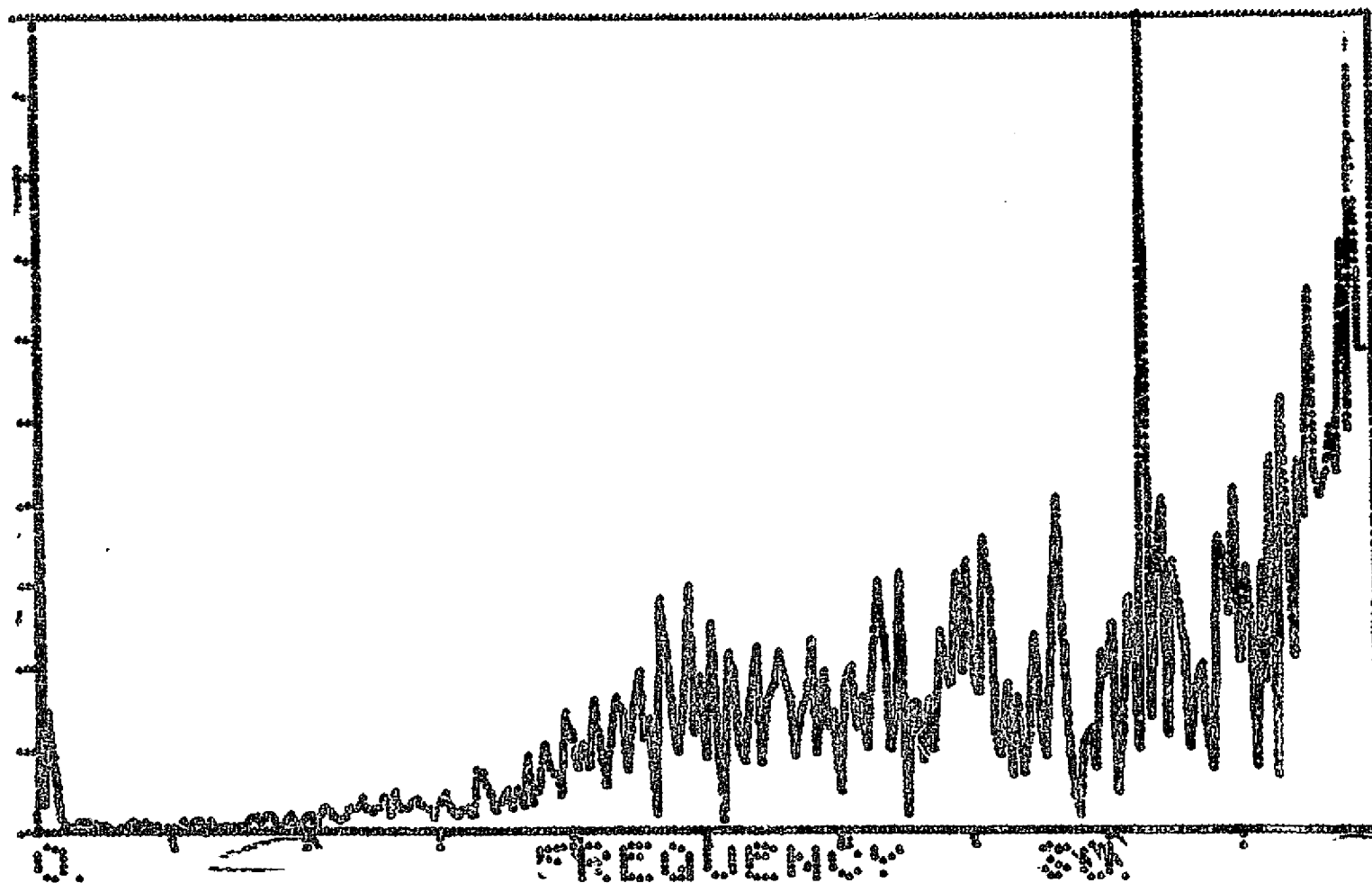




10.

.1964

0.



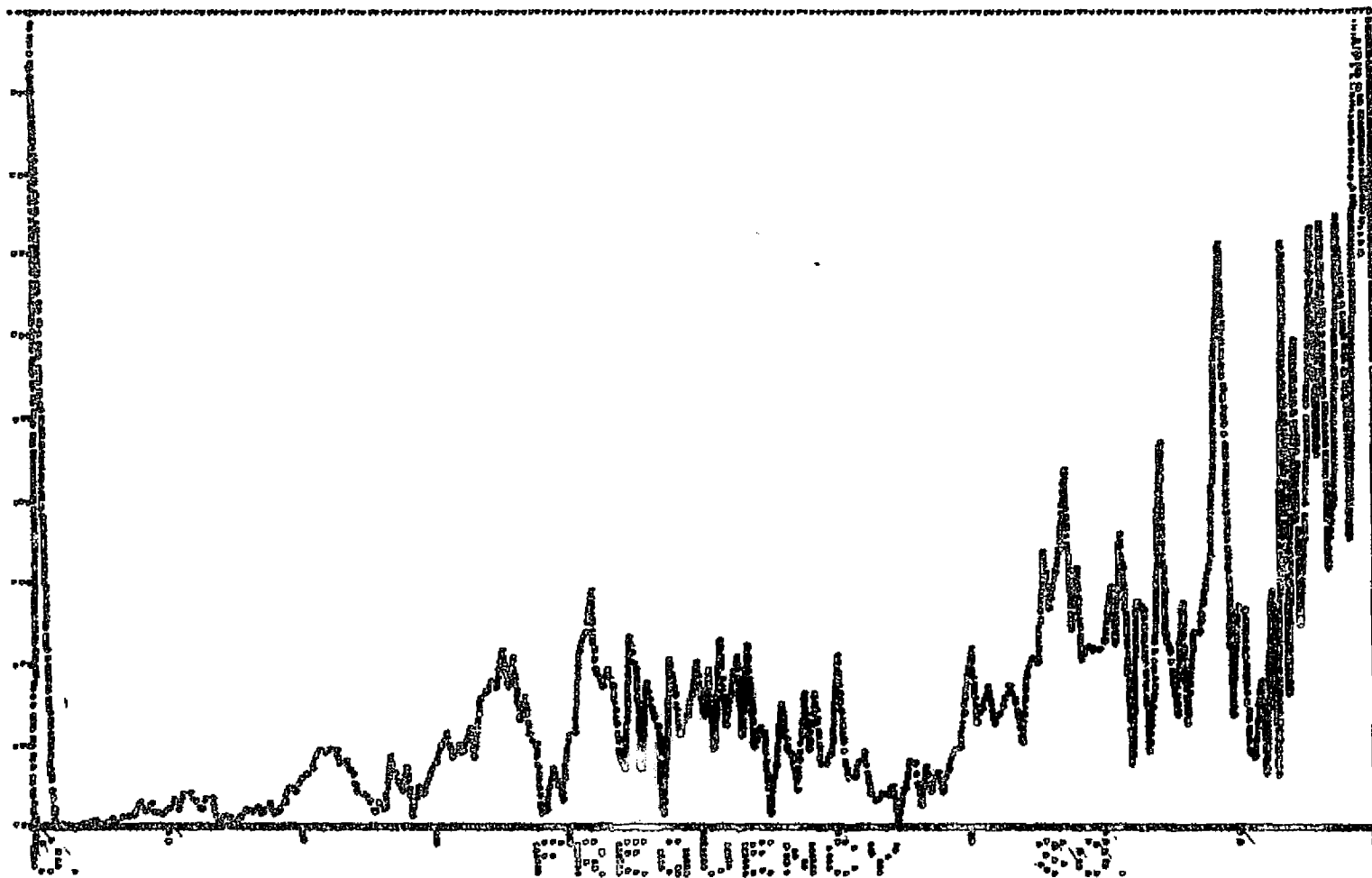
amplitude

size= 256

i.

PACK

0.



COMPLEX

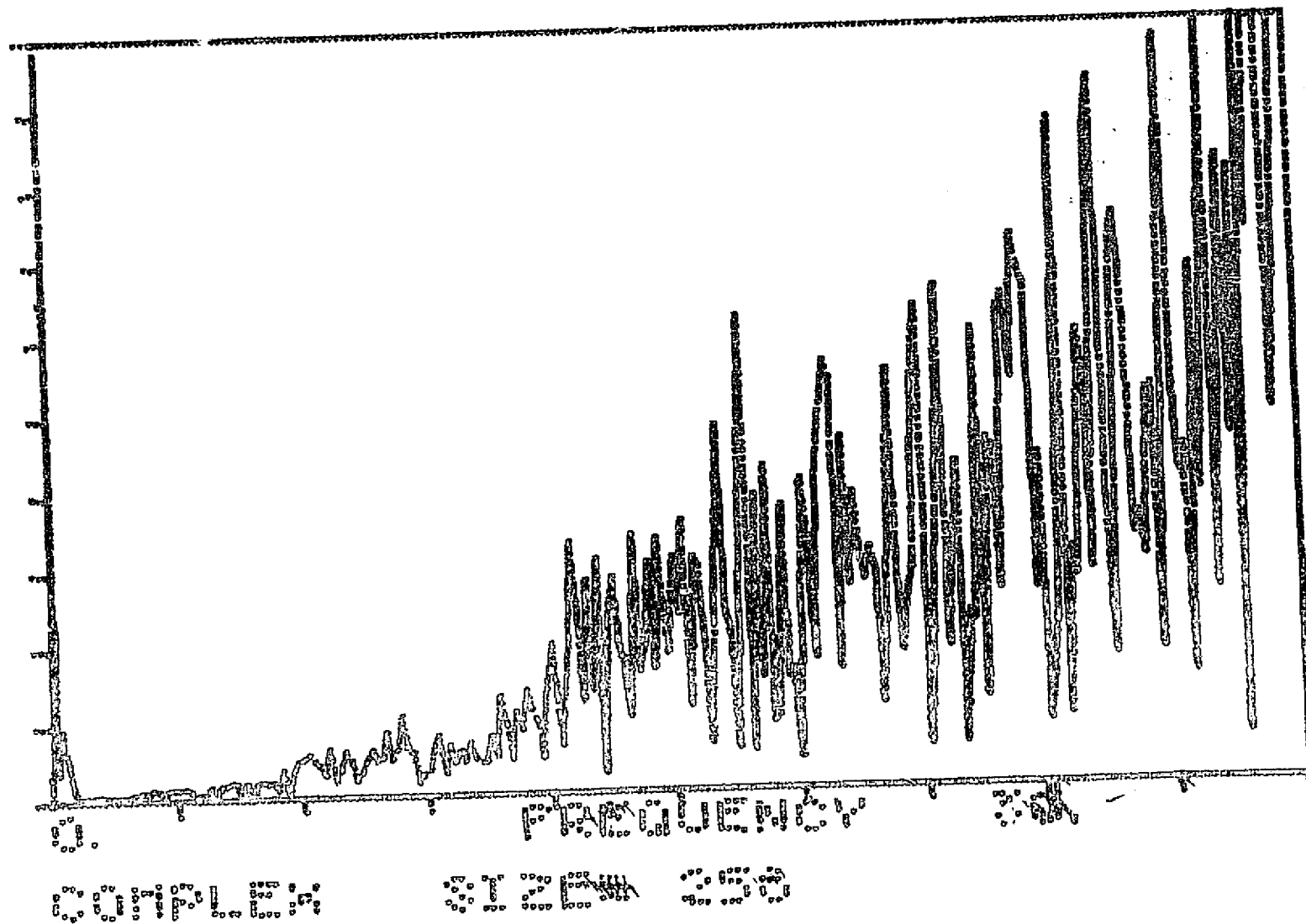
SIZE: 250

AL7/FL1

5.

FROM

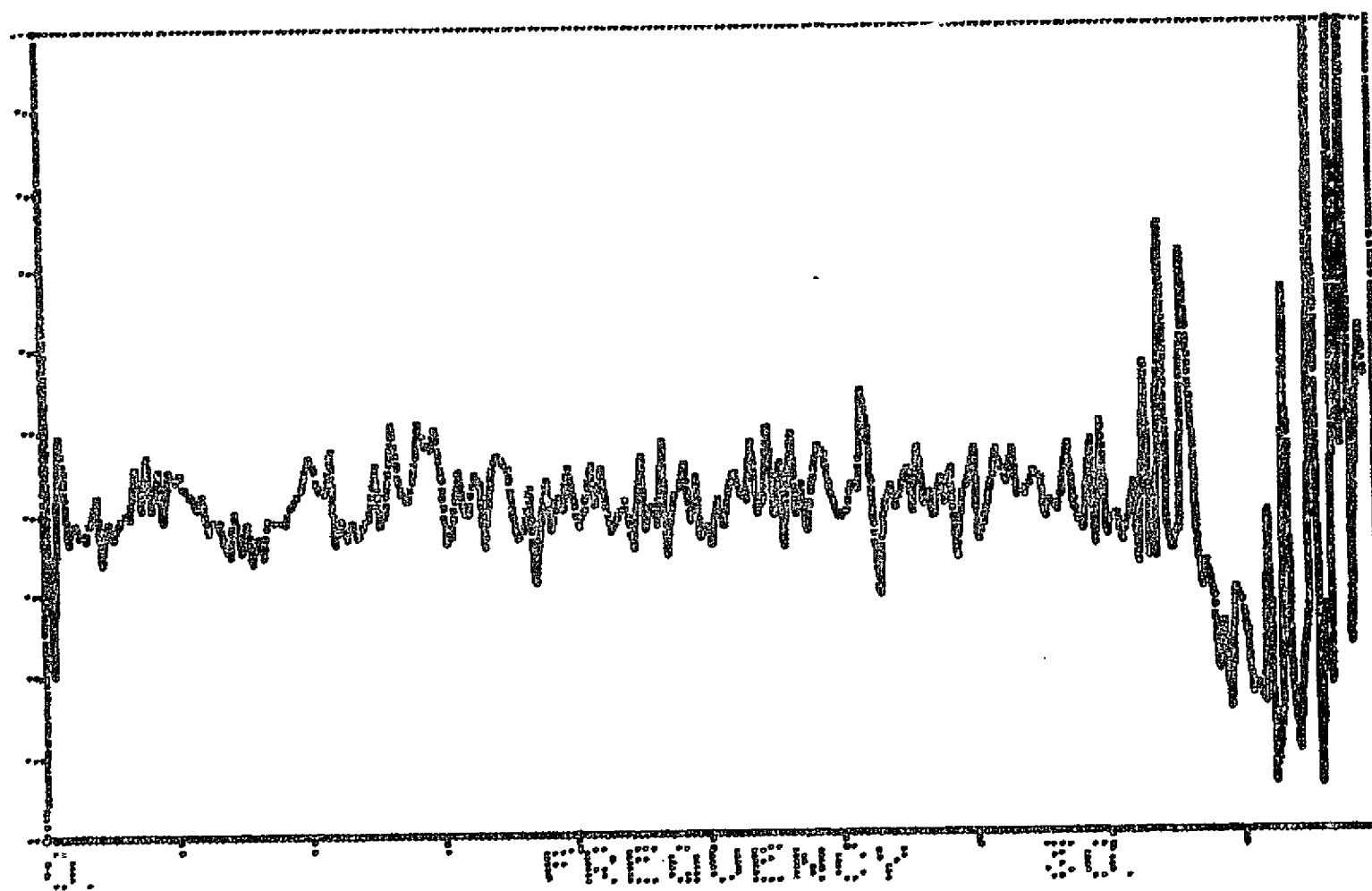
0.



5.

HIGH

0.



COMPLEX

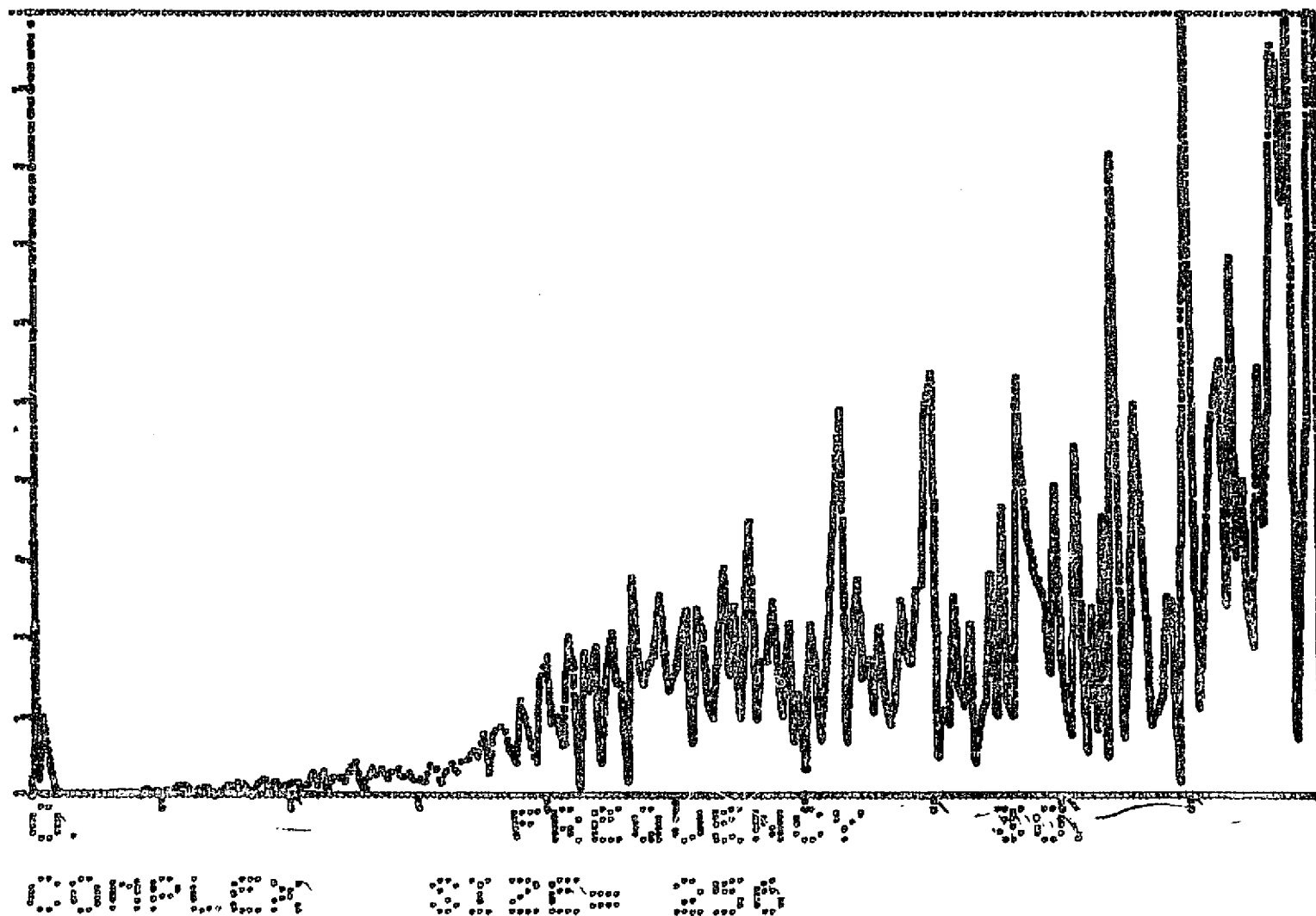
SIZE= 256

Δ P/FL1

40.

1766H

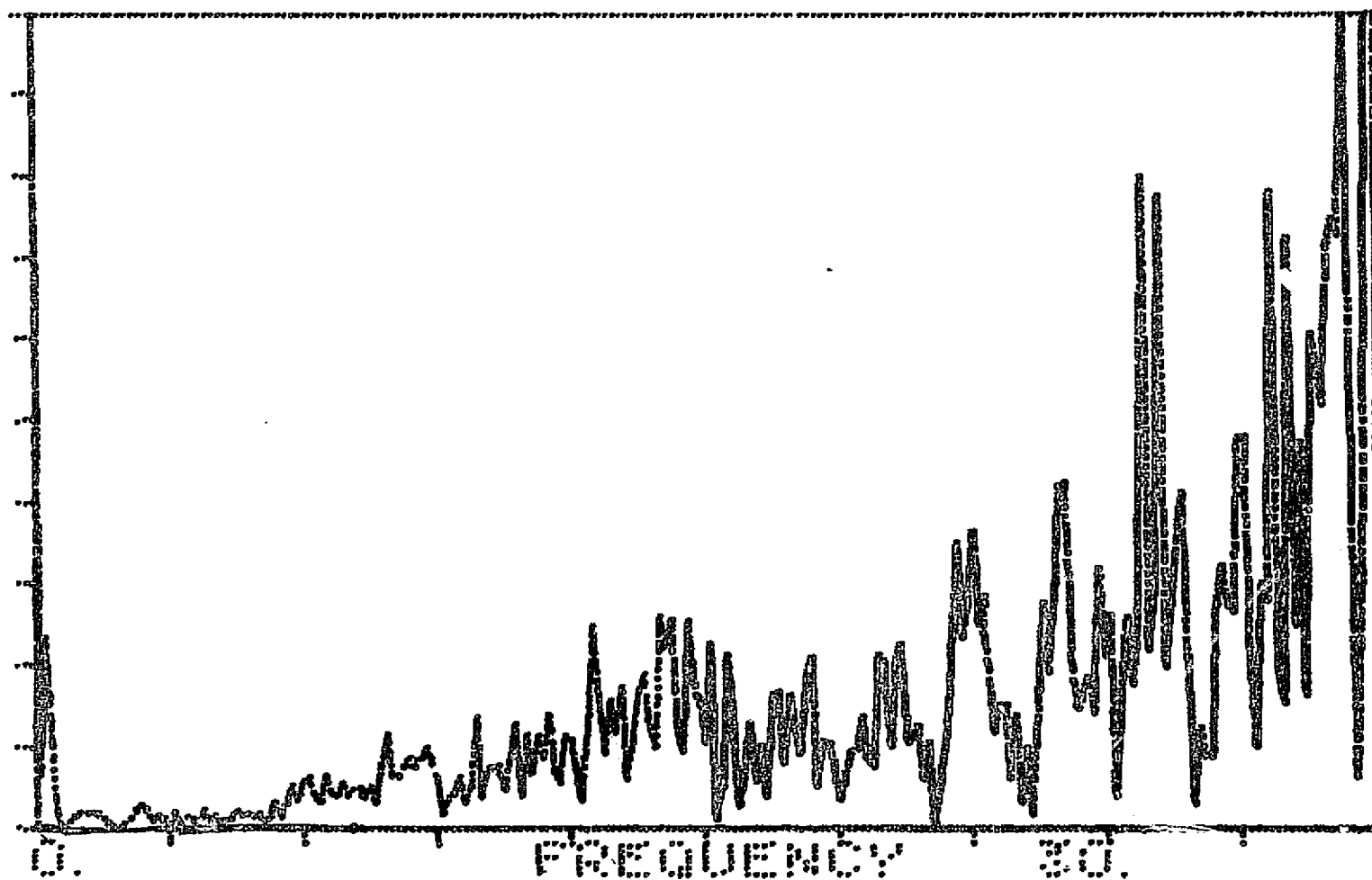
0.



10.

11/10/11

0.



COMPLEX

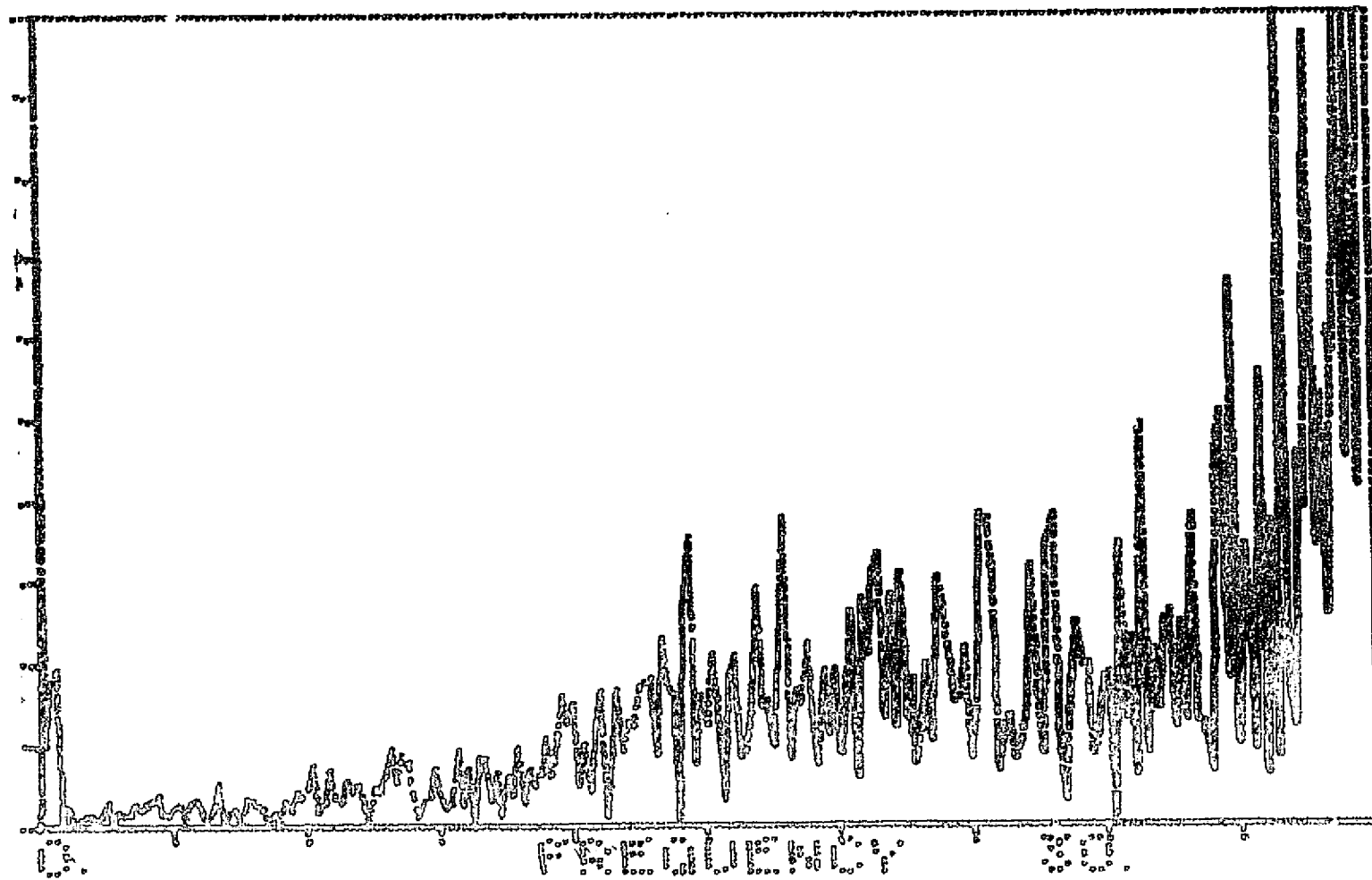
SIZE= 255

AL5/FL1

10.

1000

0



AMPLITUDE

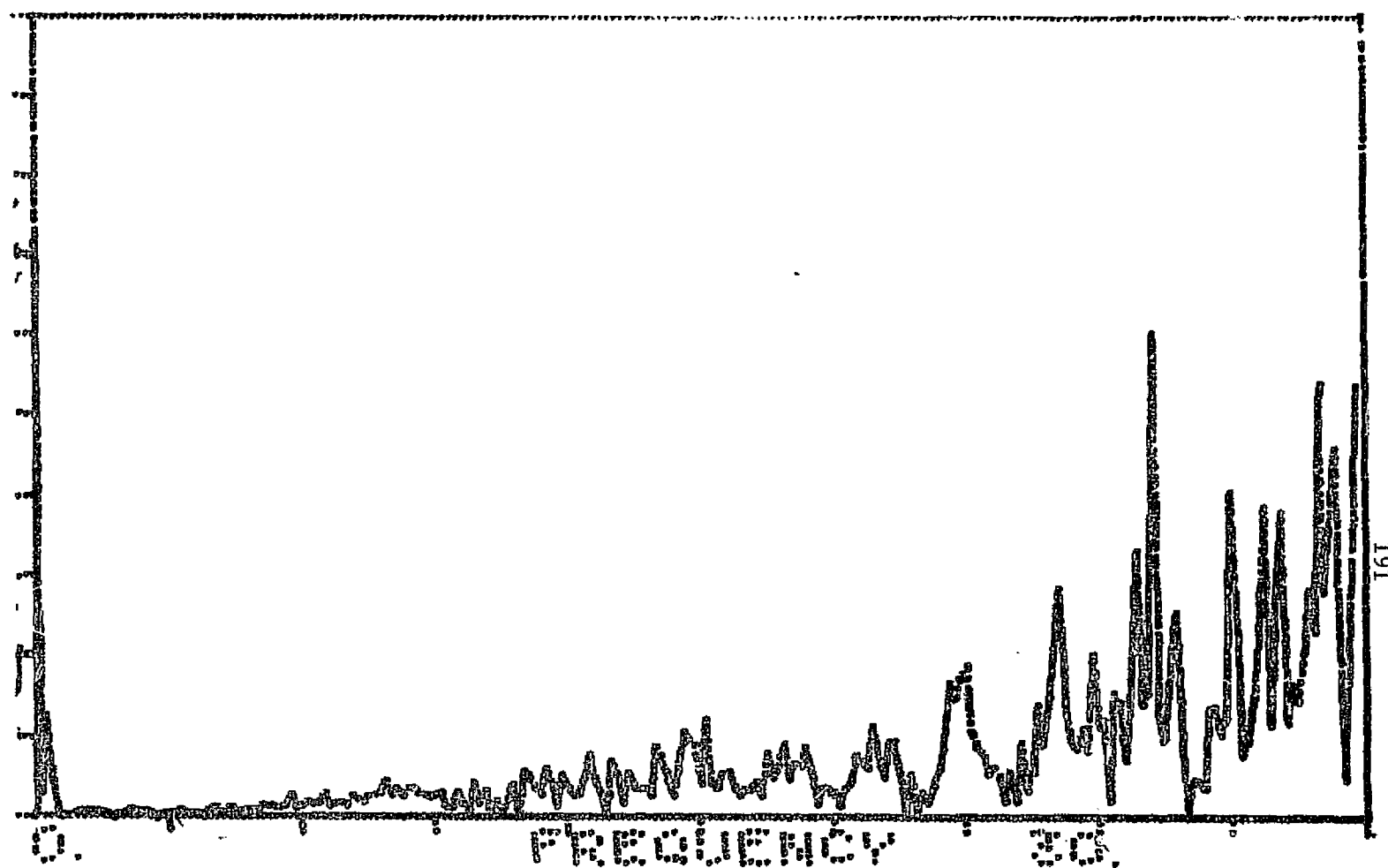
FREQUENCY



30.

11954

9.



191

COMPLEX

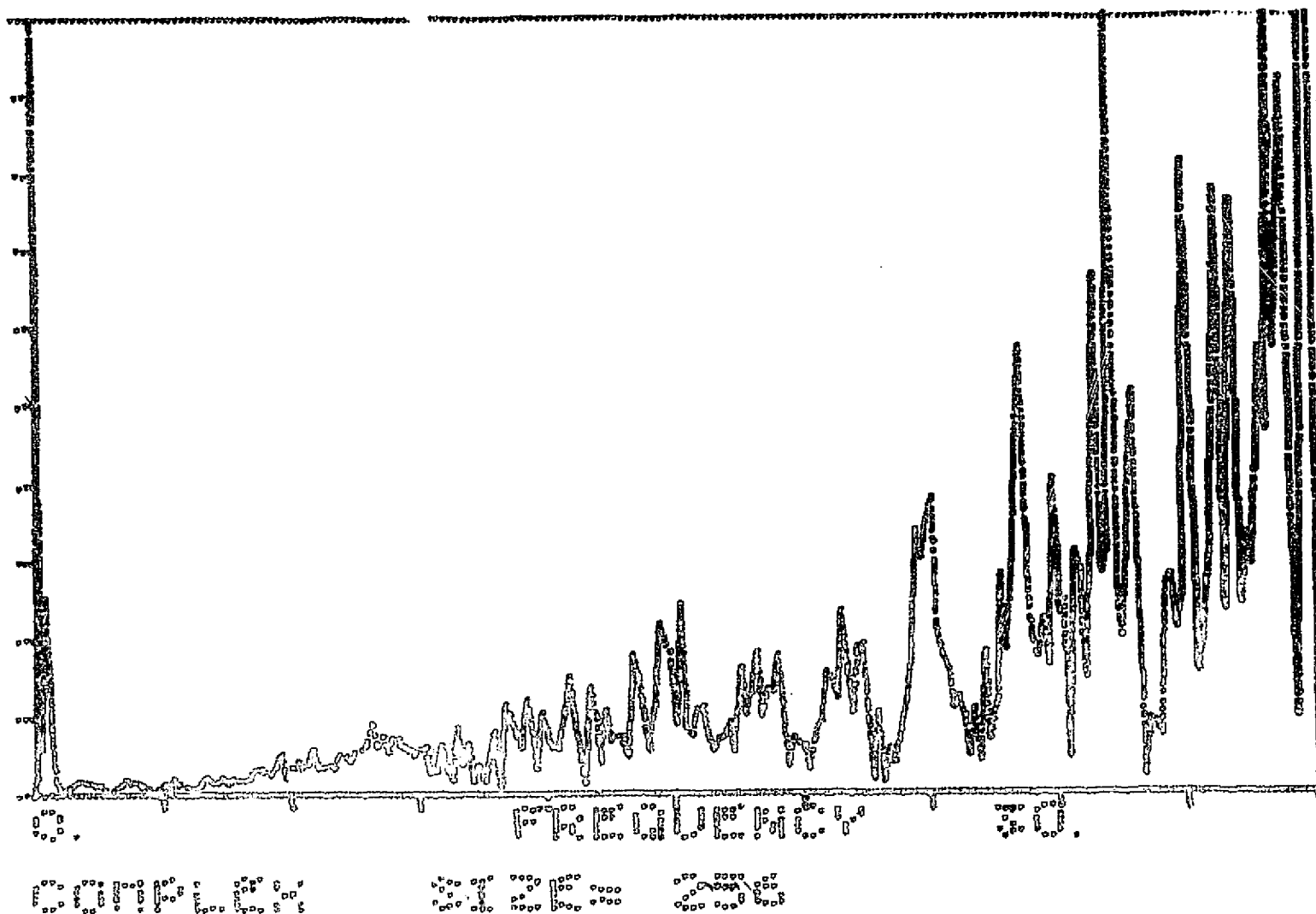
SIZE= 155

AL9/FL1

10.

11000

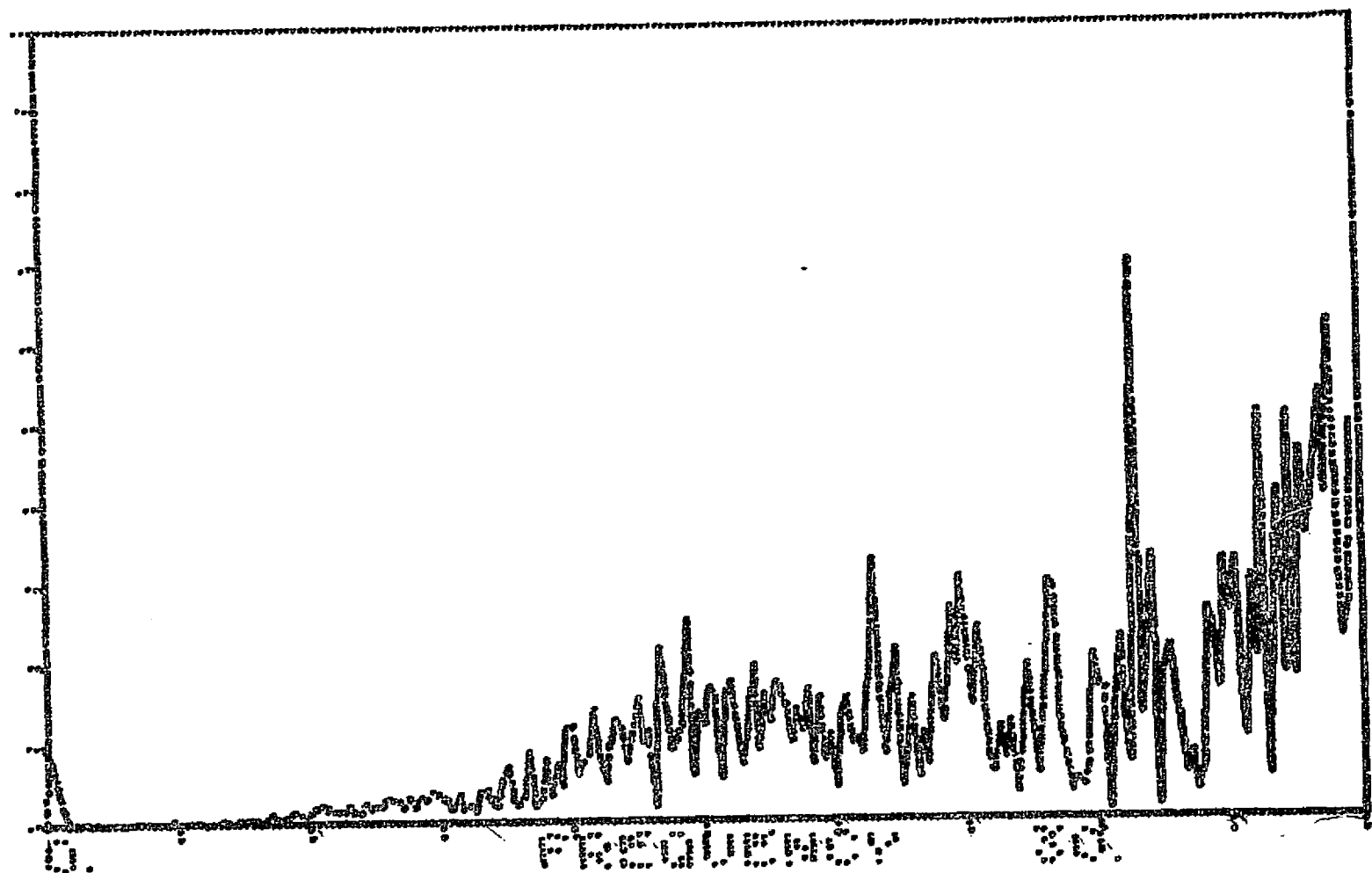
01



10.

1968

0.



193

COMPLEX

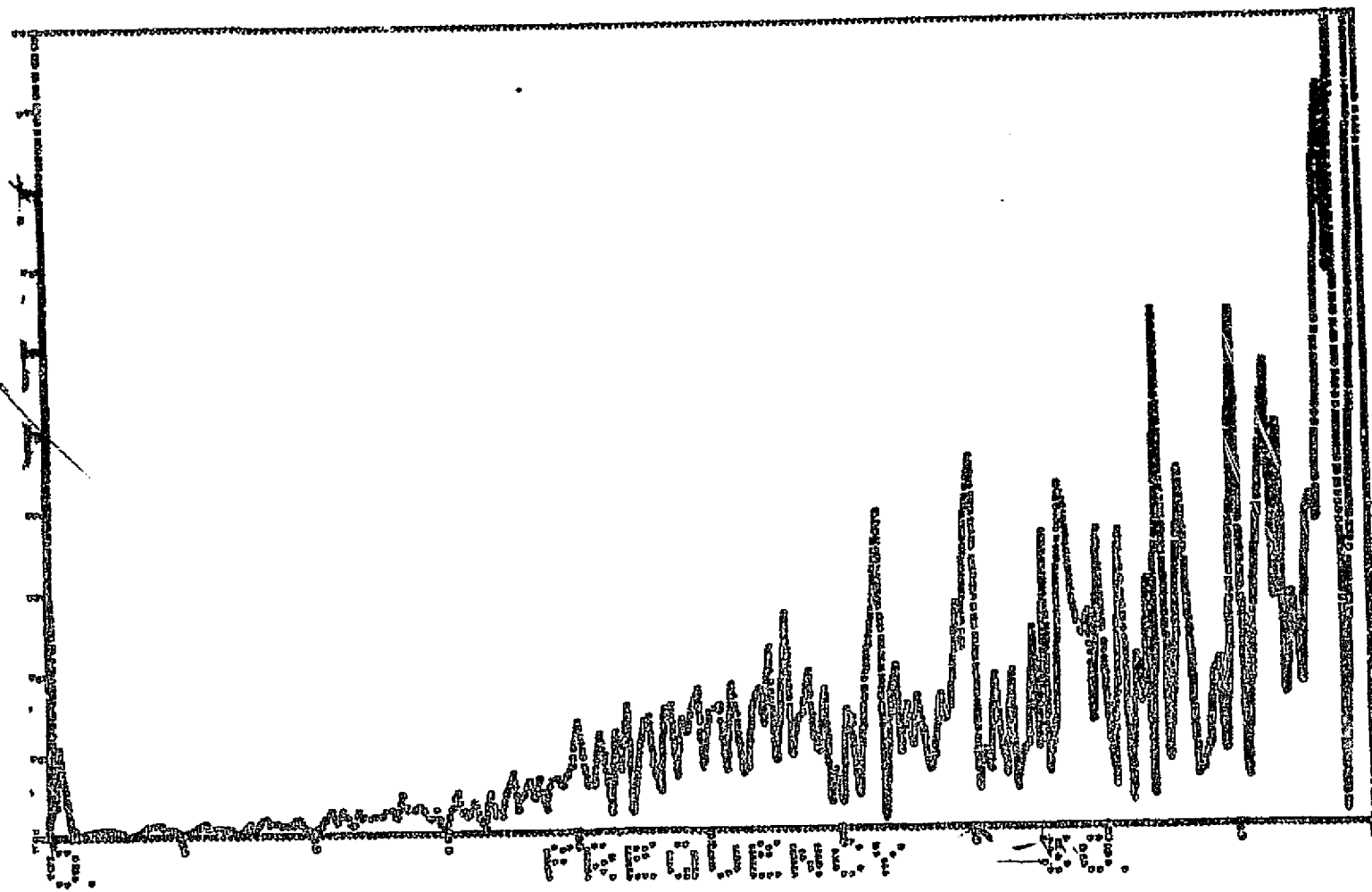
SIZE= 256

AL10/FL1

30.

MAGN

0.



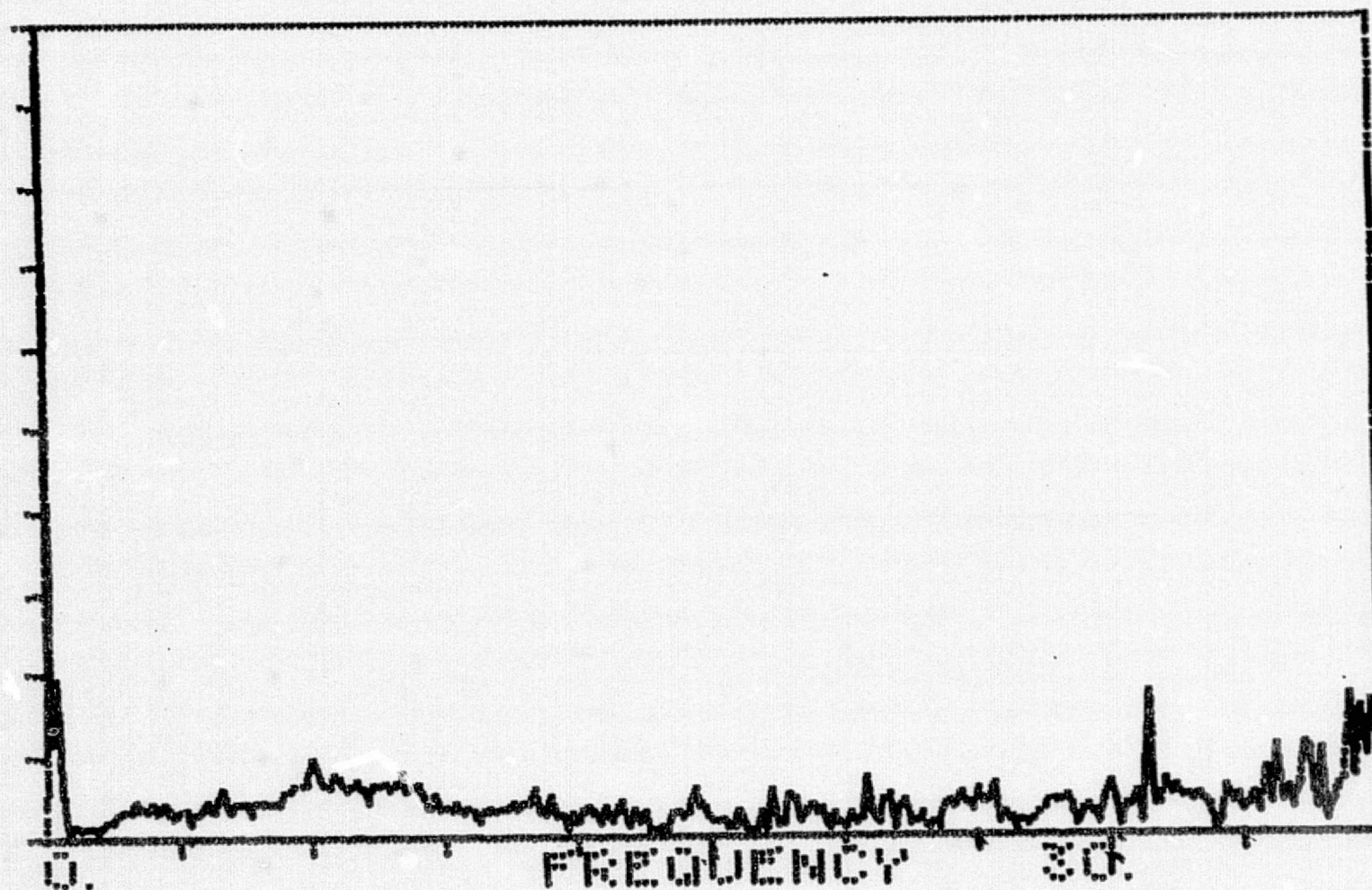
COMPLEX

SIZE: 2048

. 5

MAGN

0.



COMPLEX

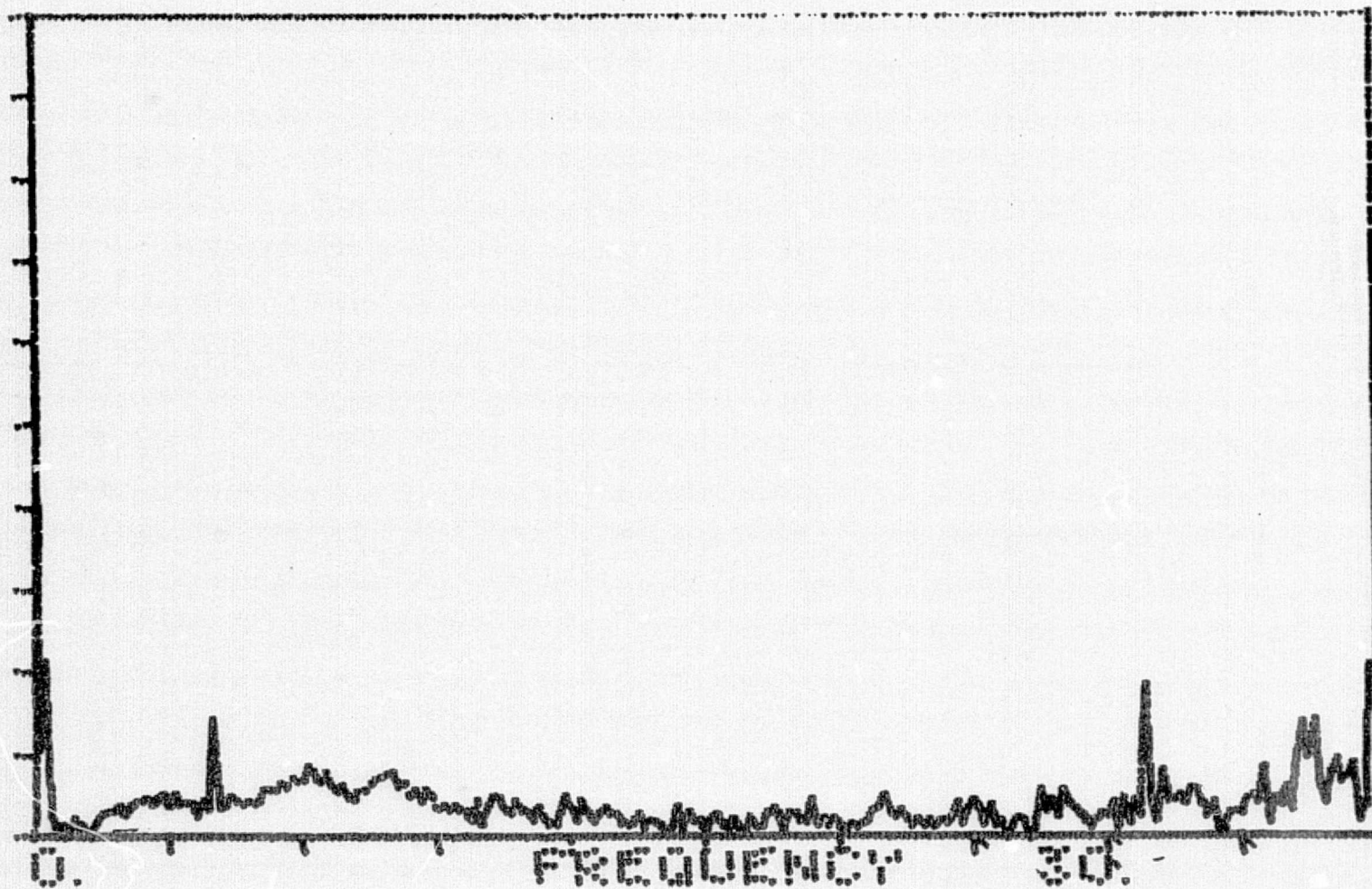
SIZE= 255

DL1/FL1

. 5

MAGN

0.



COMPLEX

SIZE= 256

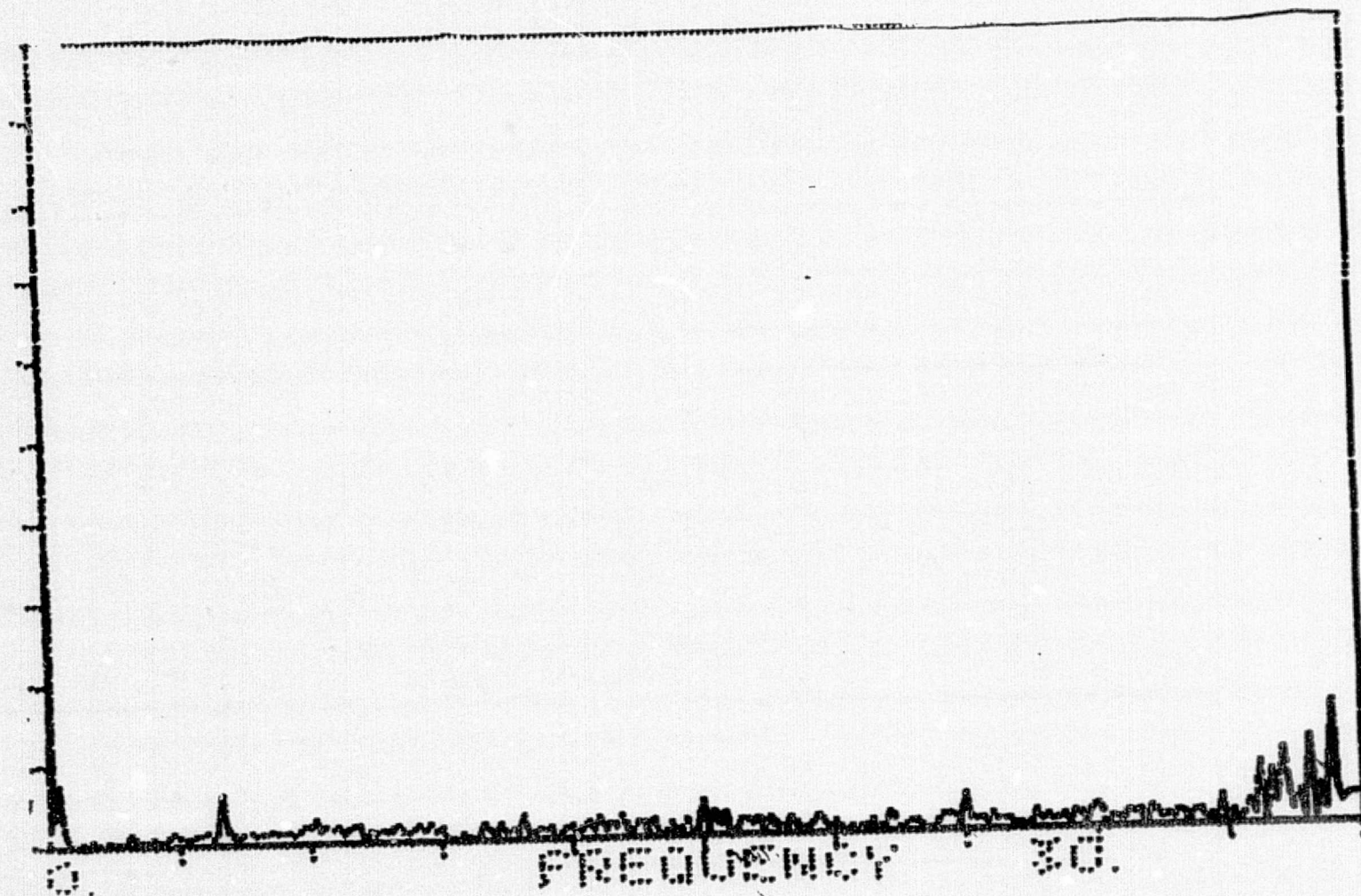
DL2/FL1



. 5

FAST

0.



SAMPLE

SIZE = 256

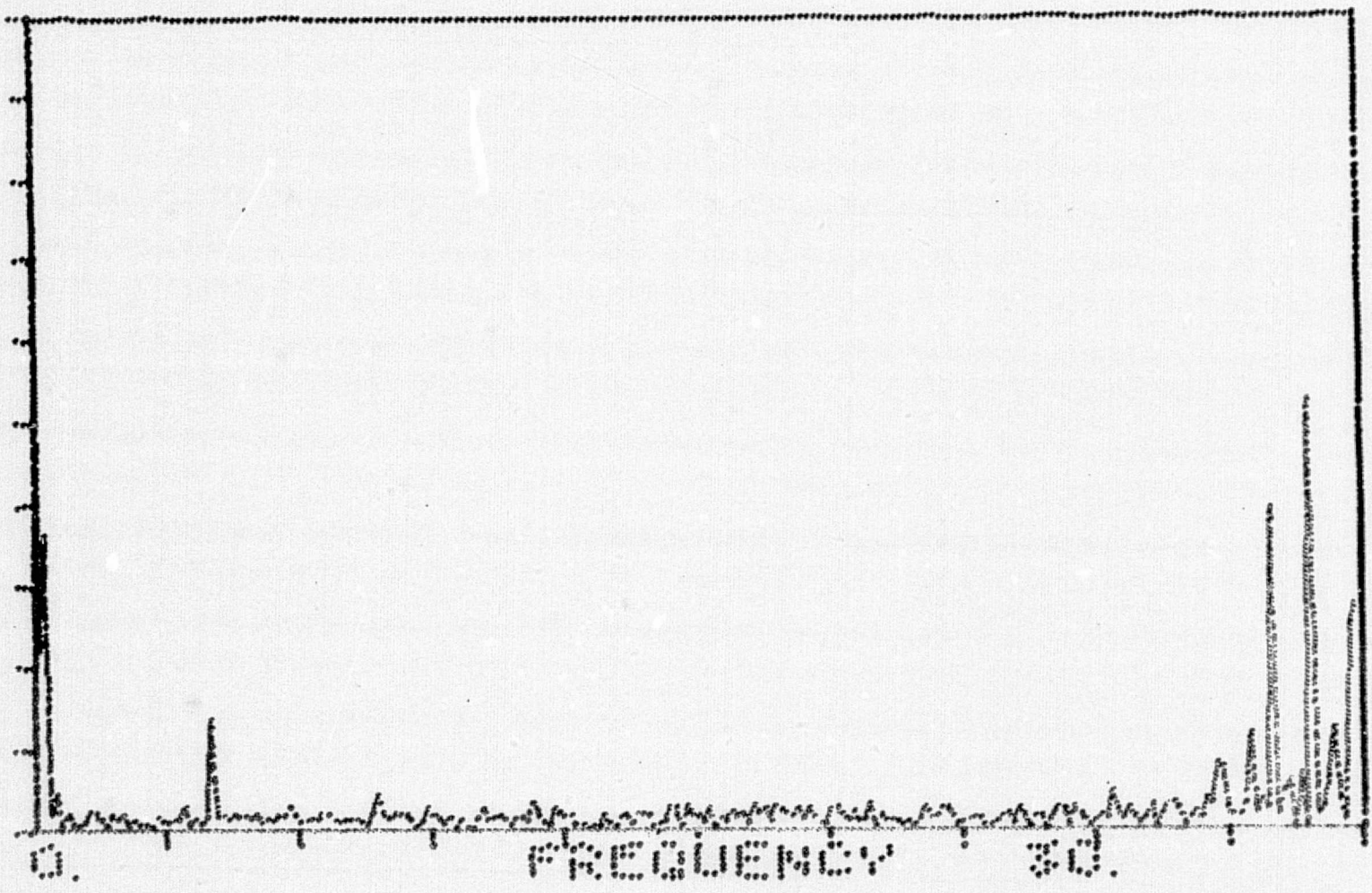
DL3/FL1



. 5

MAGN

0.



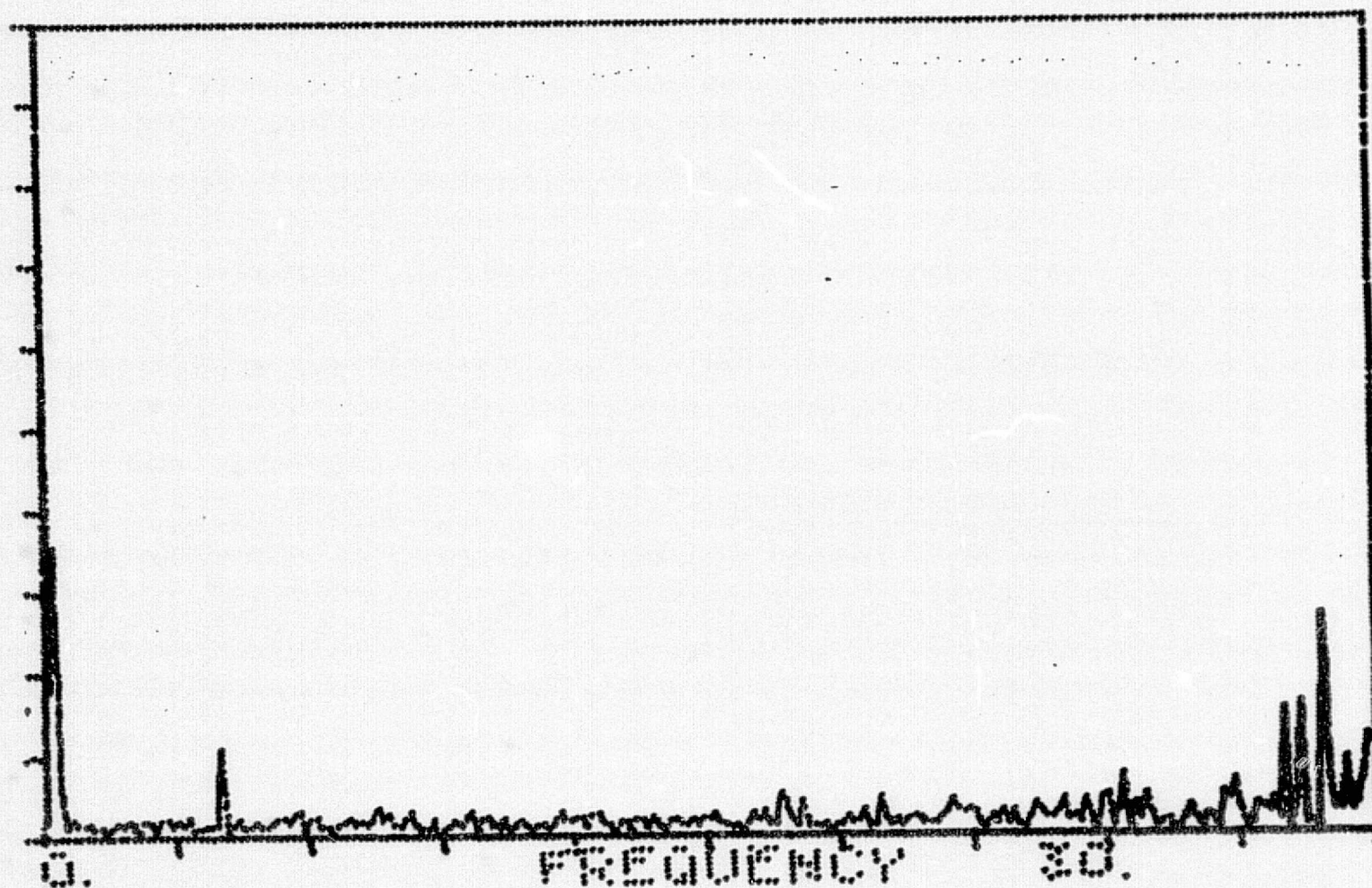
COMPLEX

SIZE= 256

DL4/FL1

. 5

MAGN



COMPLEX

SIZE= 256

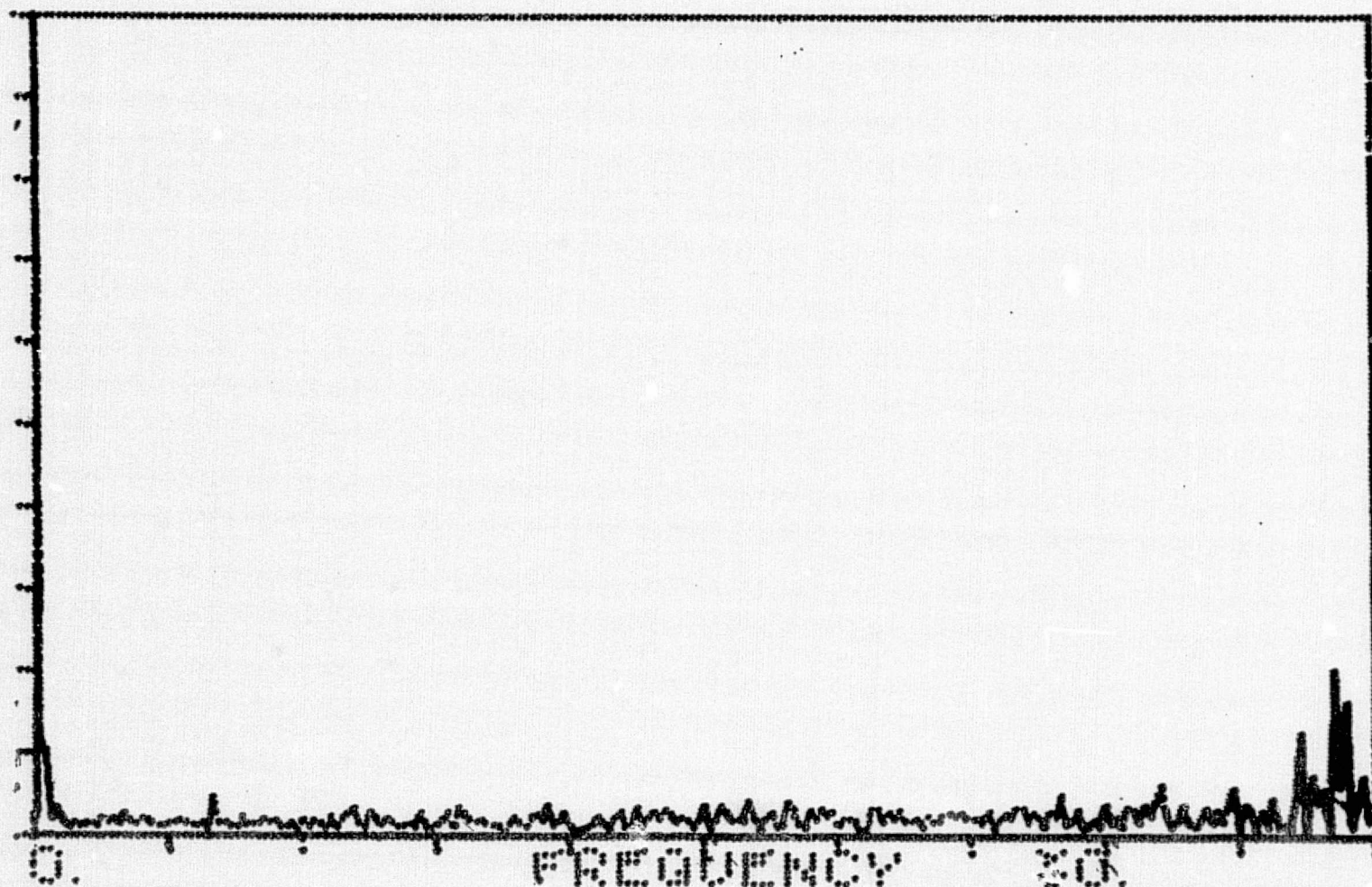
DL5/FL1



. 5

MAON

0.



COMPLEX

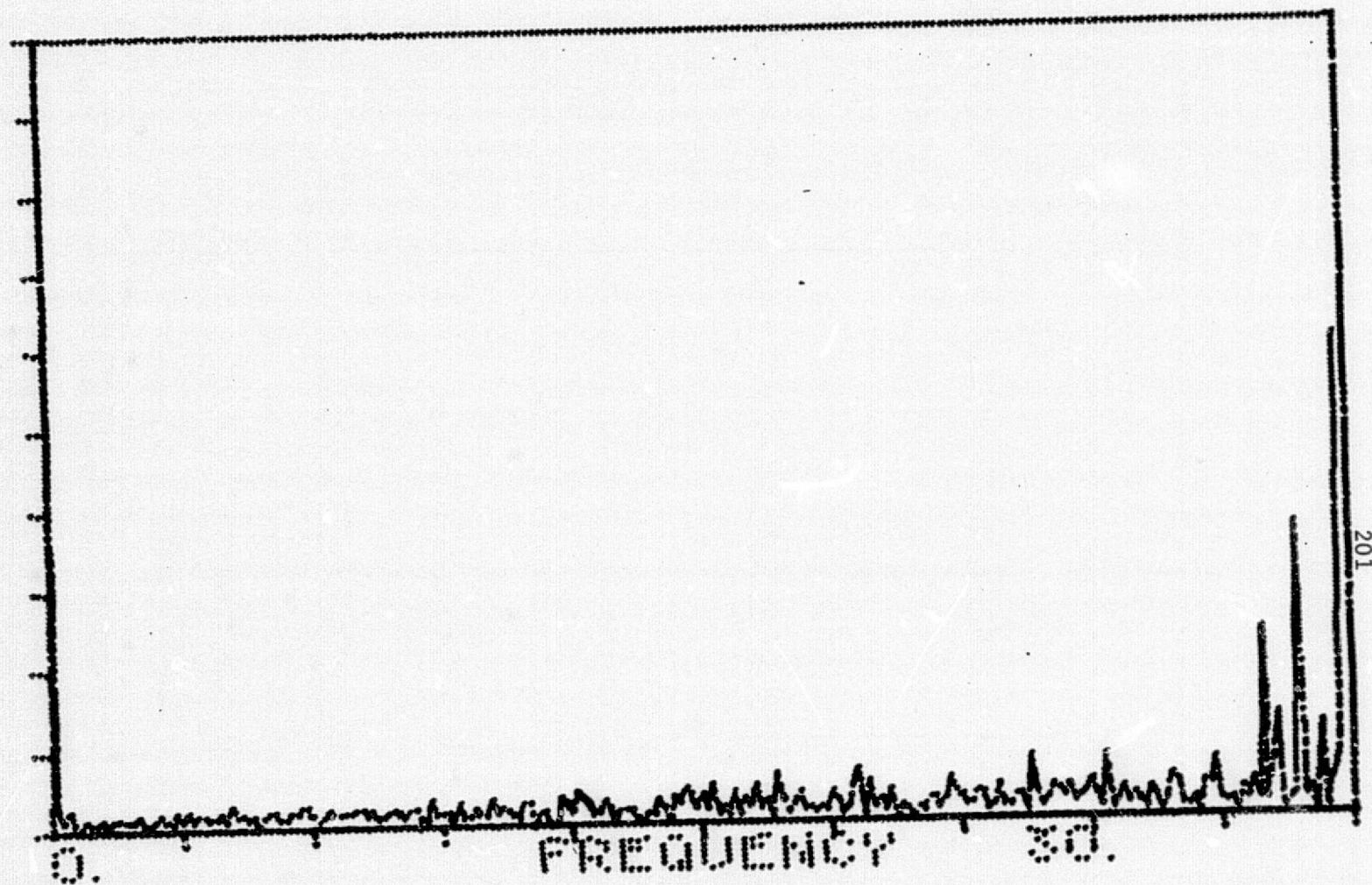
SIZE= 256

DL6/FL1

. 5

MAGN

0.



COMPLEX

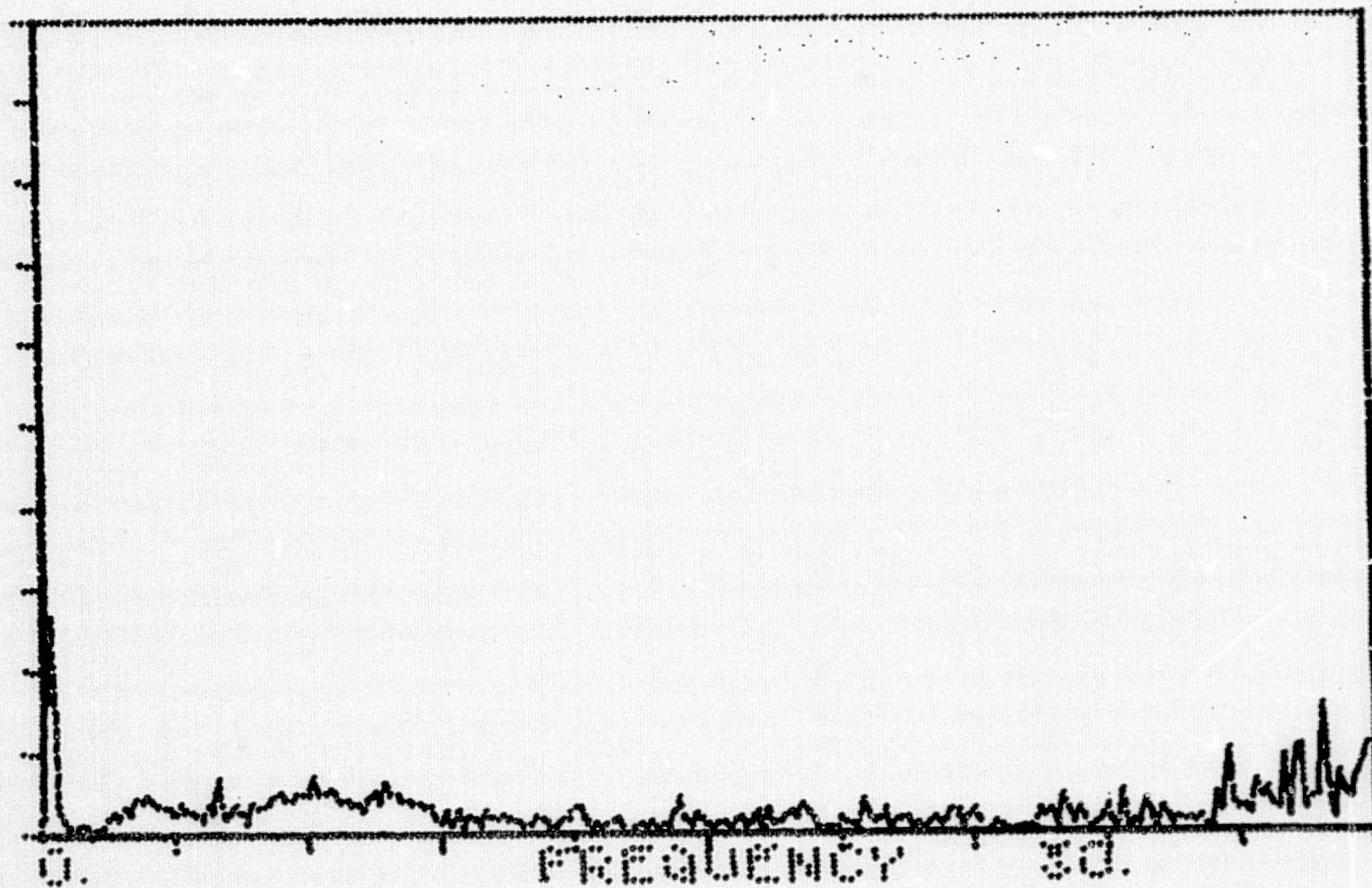
SIZE= 256



5

MAGN

0.



COMPLEX

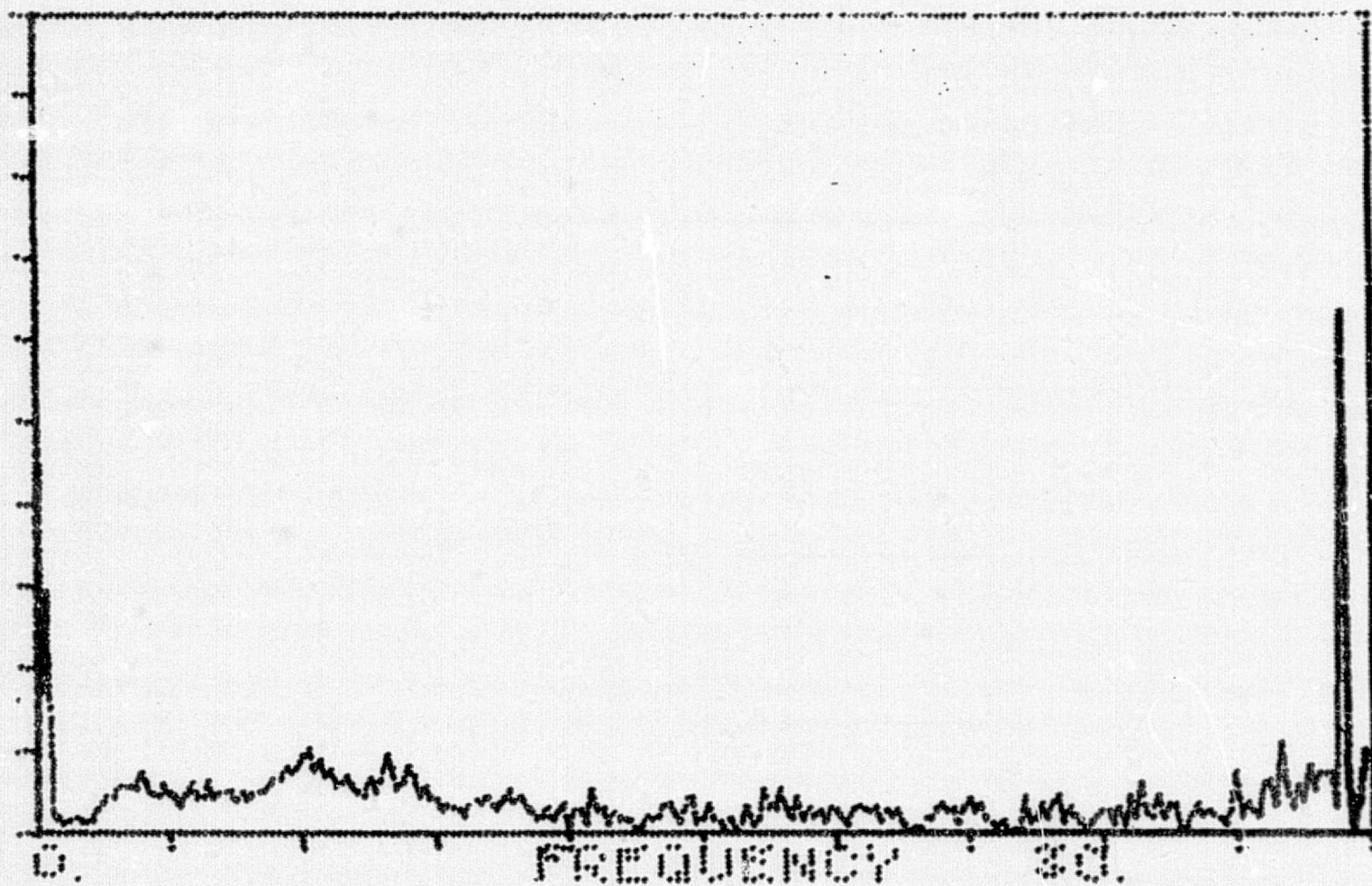
SIZE 256

DL8/FL1

5

90N

0.



COMPLEX

SIZE= 256

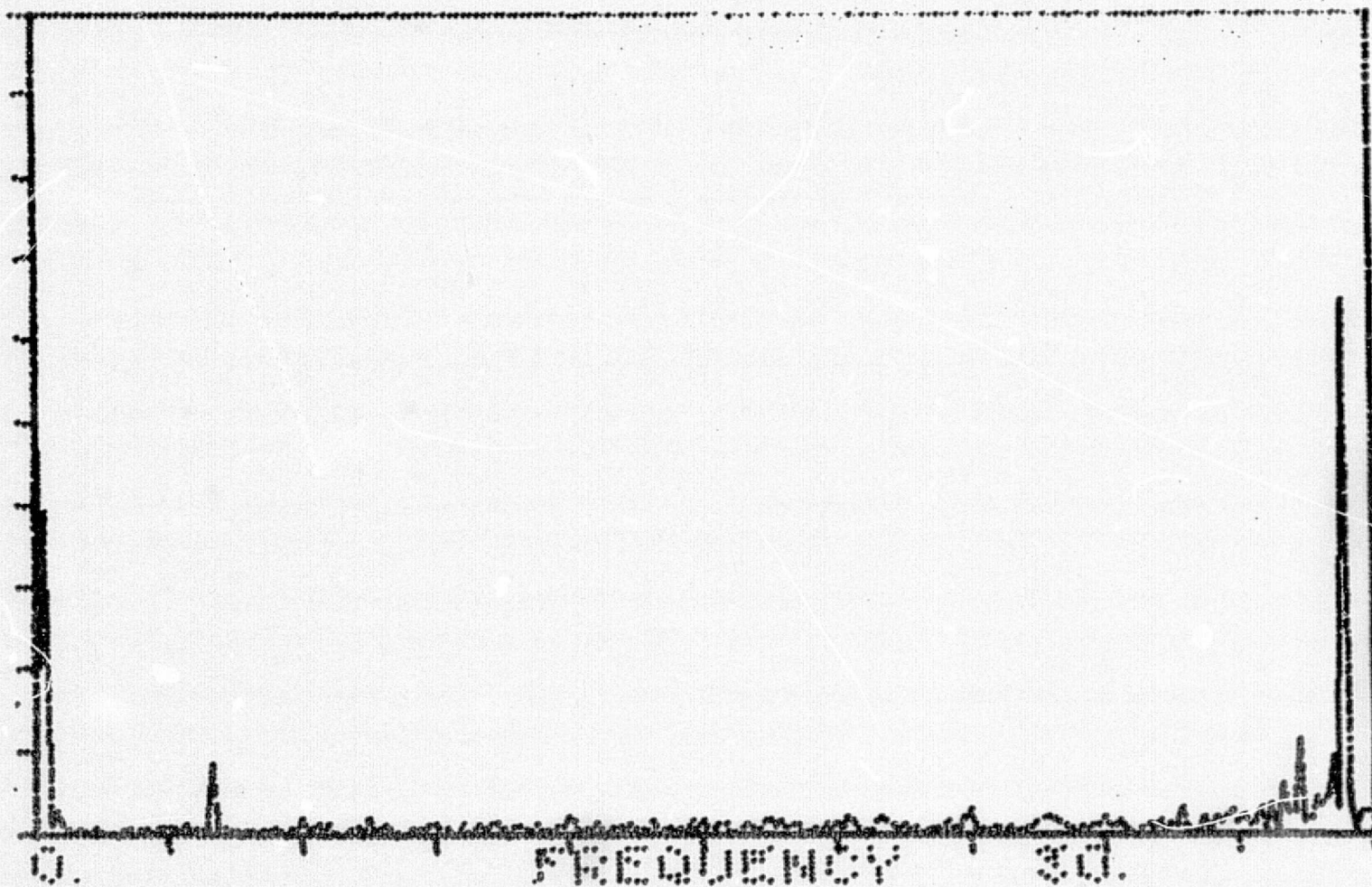
DL9/FL1



5

MAGN

0.



COMPLEX

SIZE= 256

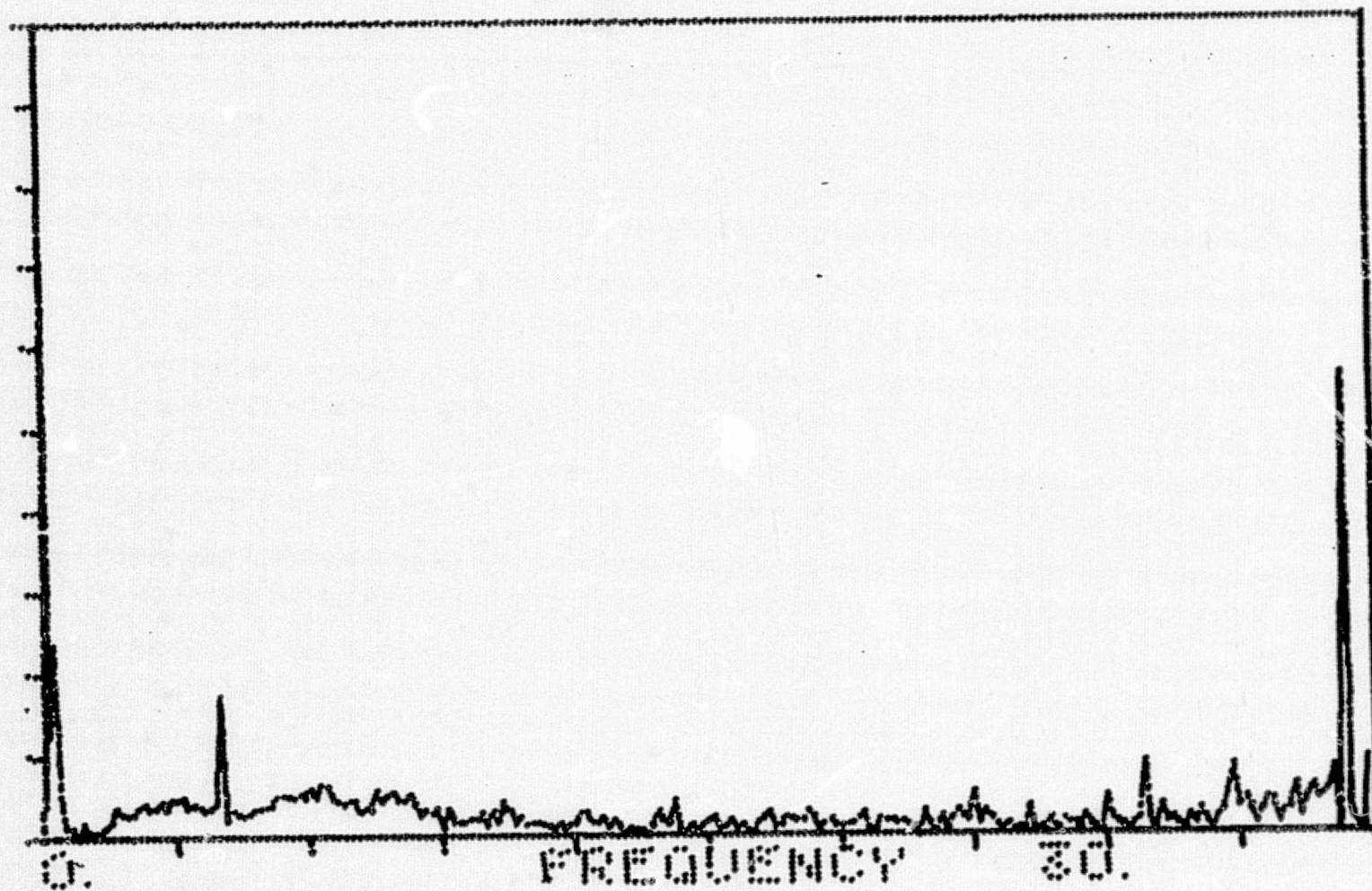
DL10/FL1



5

1146M

0.



COMPLEX

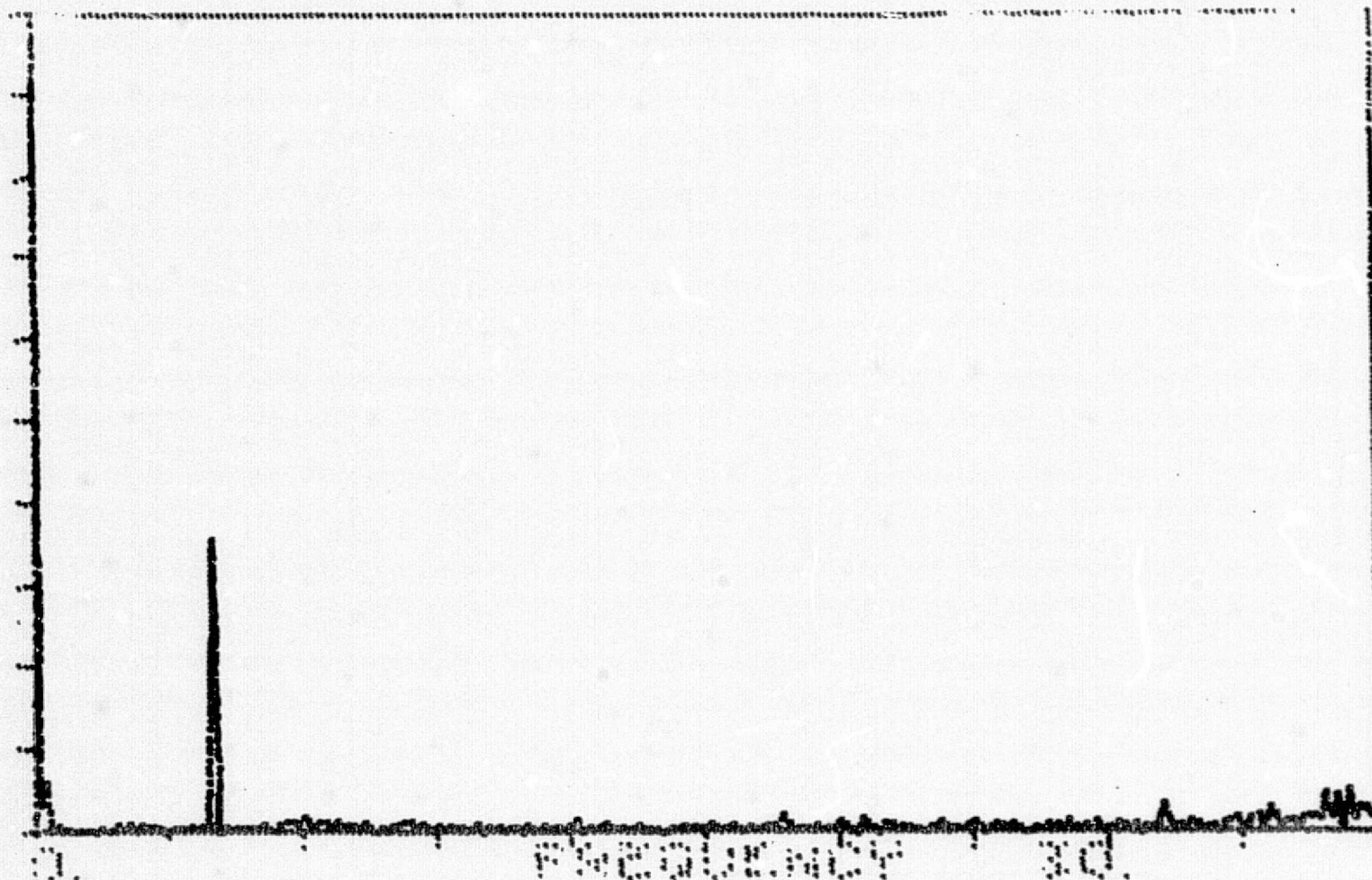
SIZE= 256

DL11/FL1

1.

1000

0.



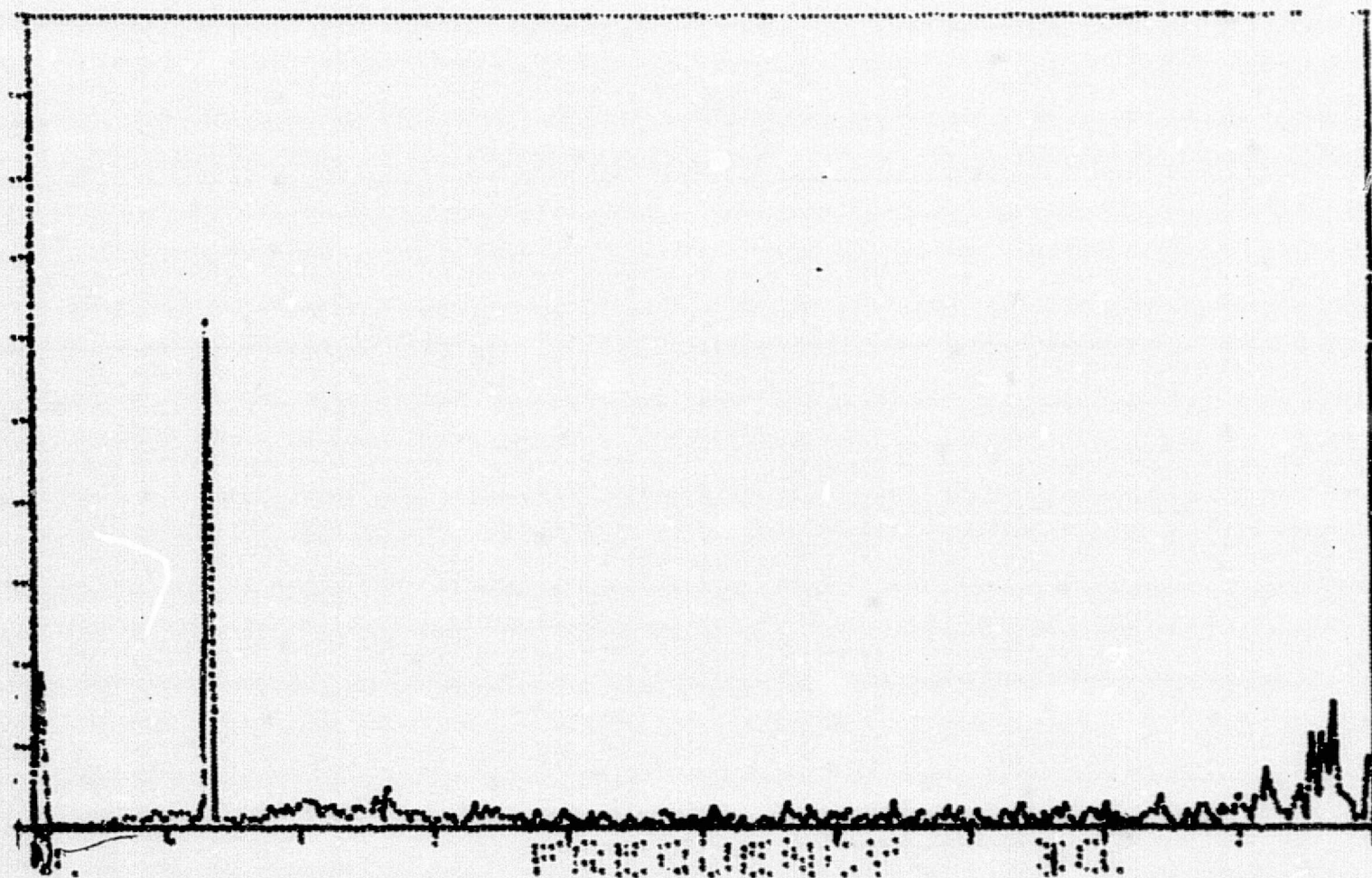
COMPLET

3120- 256



MAGN

0.



AMPLITUDE

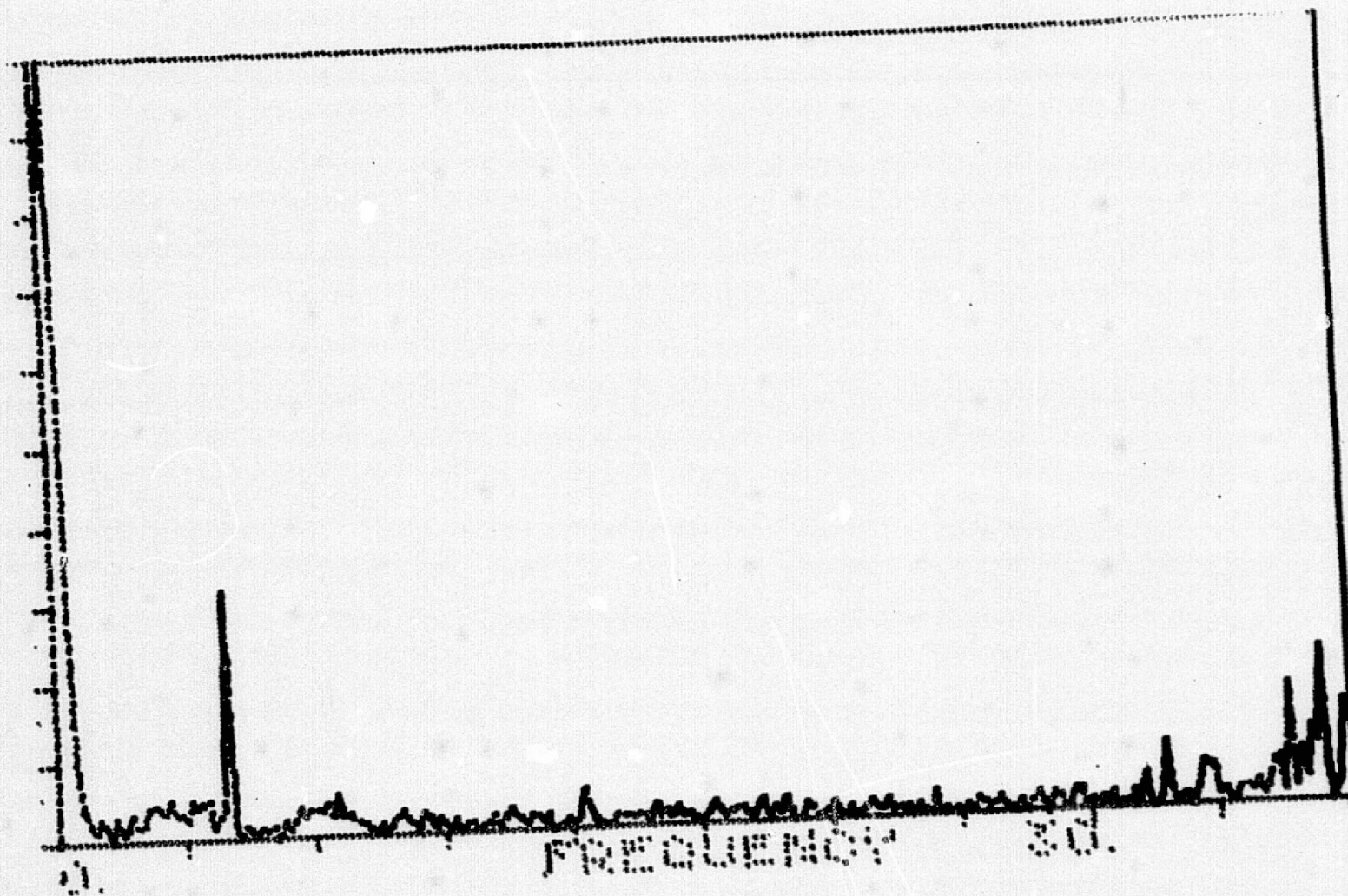
SIZE 250

DL13/FL1

5

MAGN

0.



COMPLEX

SIZE= 256

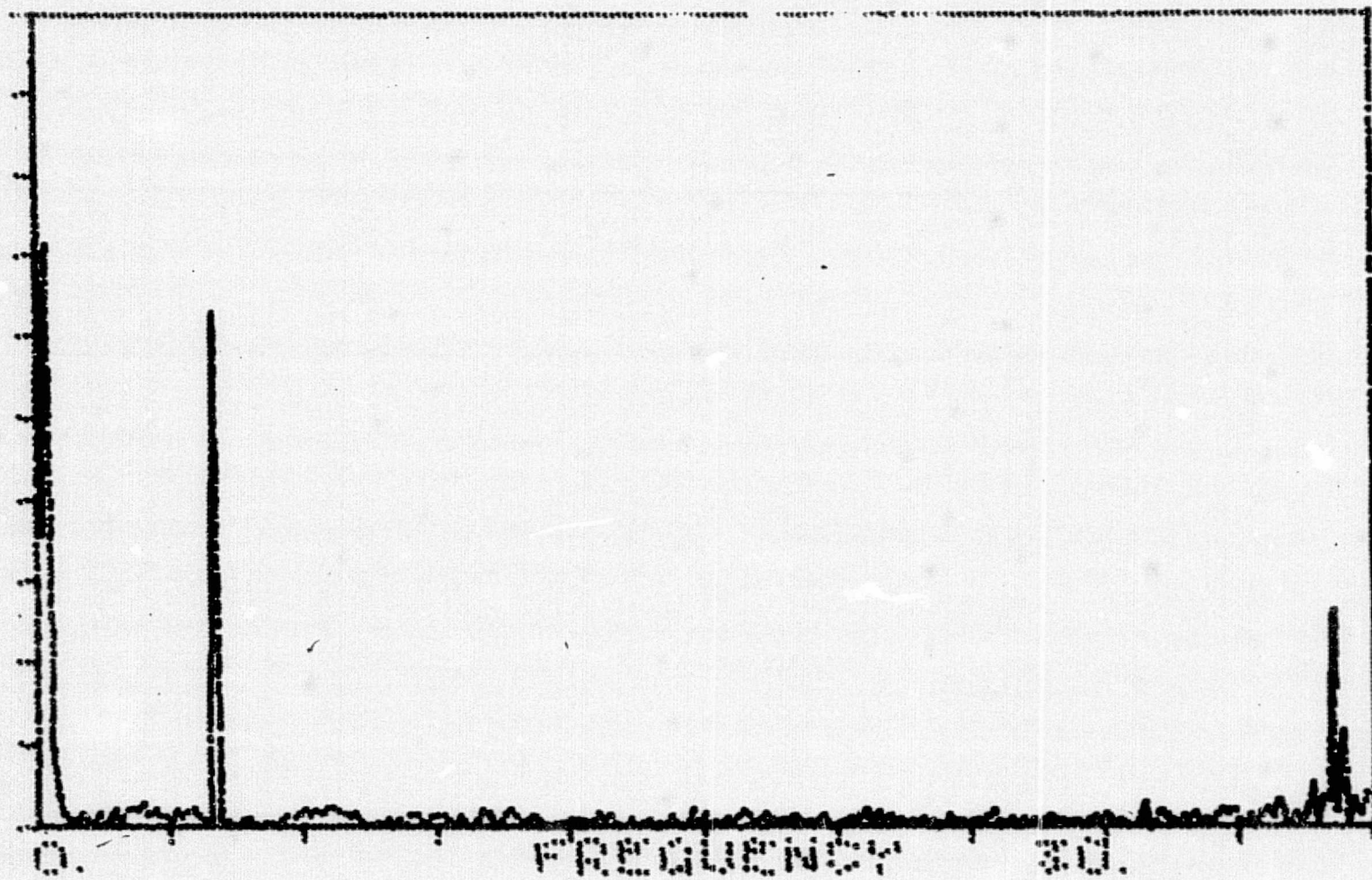
DL14/FL1



1.

MAGN

0.



COMPLEX

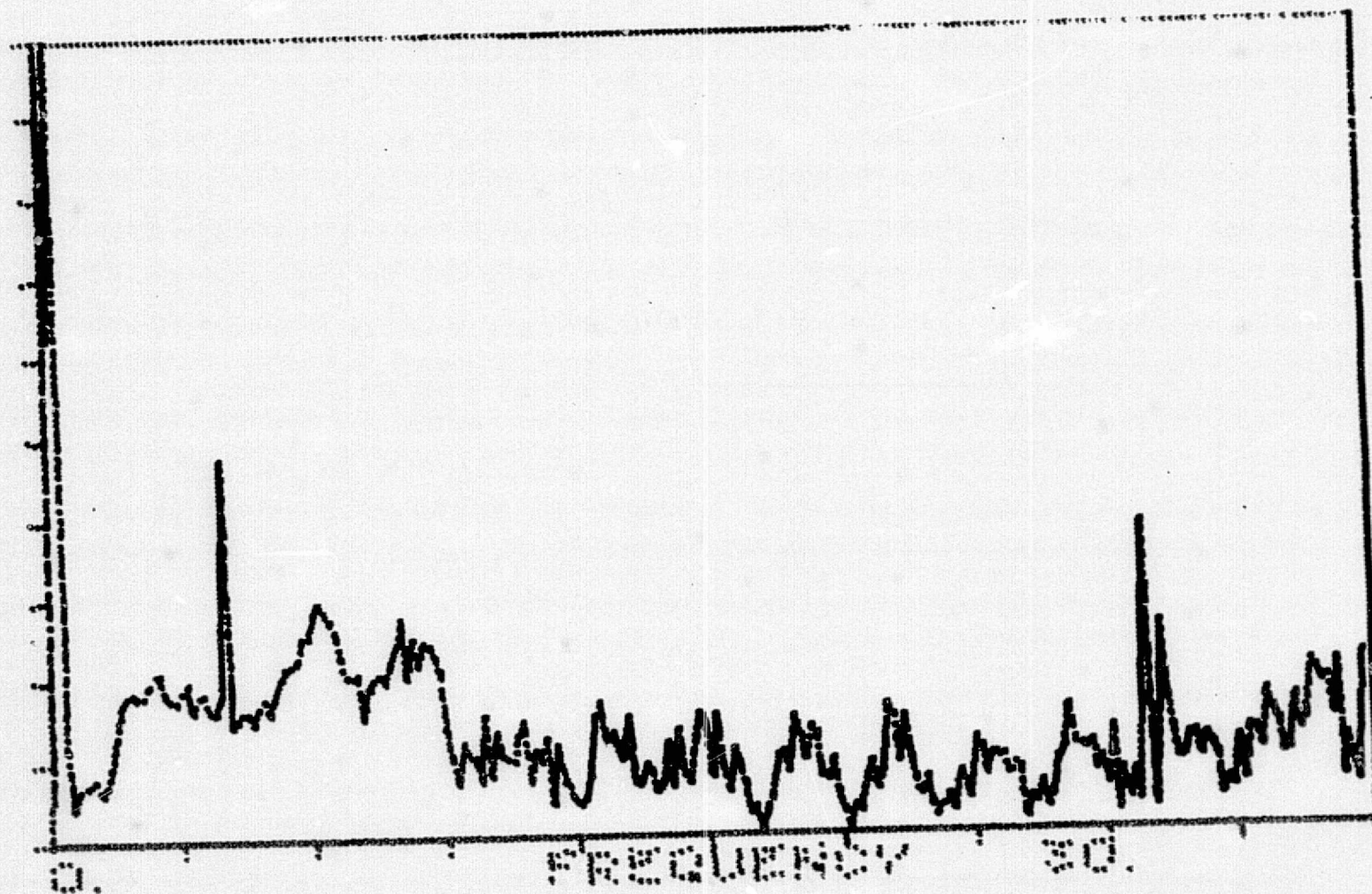
SIZE= 256

DL15/FL1

5

1964

0.



COMPLEX

SIZE= 256

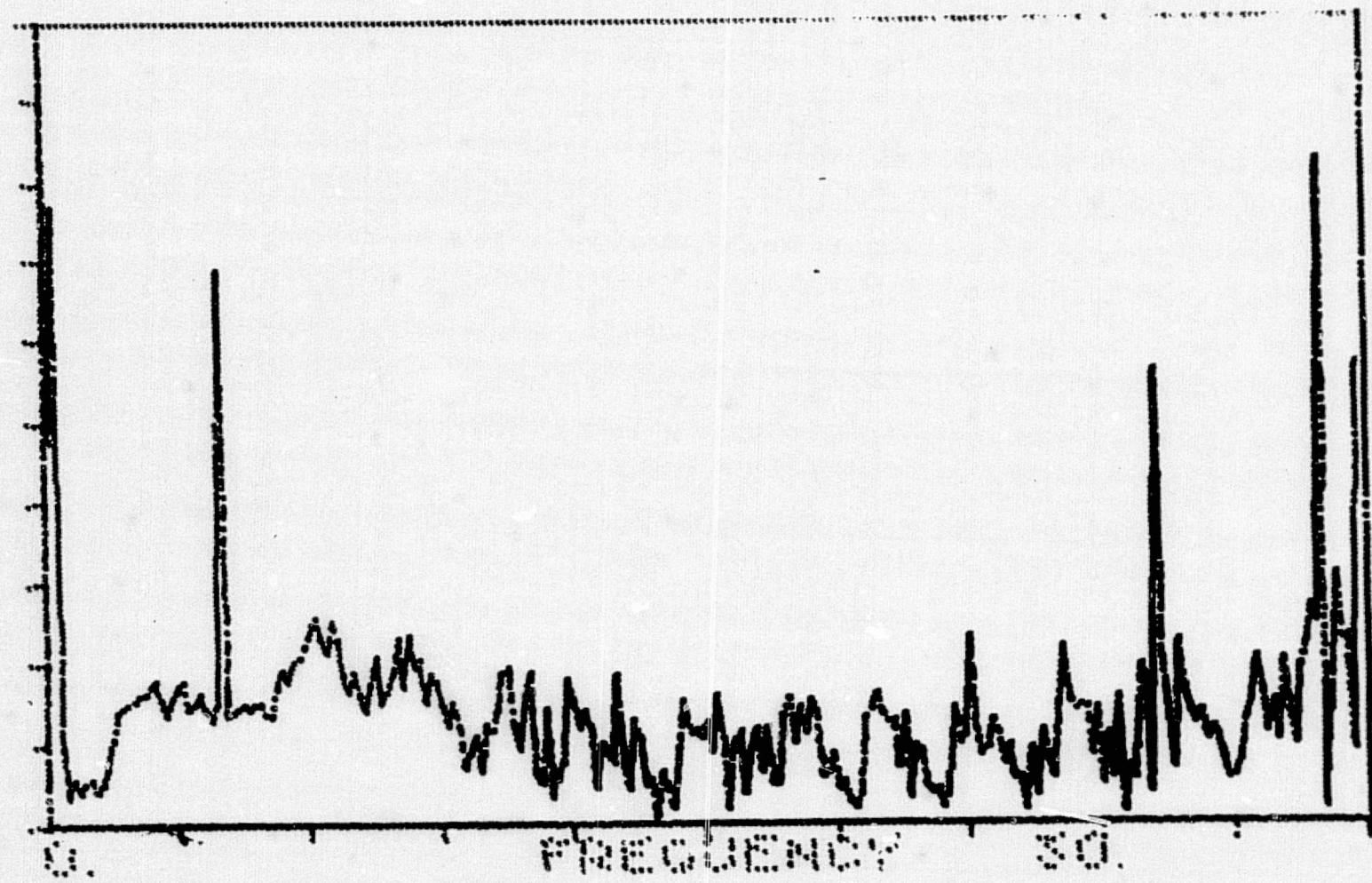
DL16/FL1



5

1964

0.



COMPLEX SIZE: 256



VOLUME II

RUN 23 TEST DATA

Y-AXIS, 8020 POUND/ACTUATOR TEST LEVEL,  
ACTUATORS 180° OUT OF PHASE

## 1 HEADING: TRAIN TRACK TRANSFER 8020 LB TEST 3/20/75

## SWEEP PARAMETERS:

2 MODE 1=LOG, 0=LIN: 1.  
 3 TYPE 1=UNI-DIRECTIONAL, 0=BI-DIRECTIONAL: 1.  
 4 START, END FREQ, HZ: .5 50.  
 FREQ RANGE -- OCTAVES, DECADES: 6.644 2.  
 5 SPECIFICATION 1=RATE, 0=DURATION: 1.  
 6 UNITS 1=OCT/MIN, 0=DEC/MIN: 1.  
 7 RATE, OCT/MIN: 2.  
 SWEEP DURATION -- MIN, SEC: 3. 19.

## TEST LENGTH:

8 SPECIFICATION 1=TIME, 0=SWEEP CYCLES: 0.  
 9 CYCLES: 1.  
 TEST TIME -- HRS, MIN, SEC: 0. 3. 19.

## START-UP AND SHUT-DOWN:

10 START-UP TIME, SEC: 120.  
 11 SHUT-DOWN TIME, SEC: .5

## VIBRATION LIMITS (P-P):

12 DISPLACEMENT, IN: 5000.  
 13 VELOCITY, IN/SEC: 9999.  
 14 ACCELERATION, G: 450.

## REFERENCE CONTROL SPECTRUM:

|                                    |    |     |     |    |
|------------------------------------|----|-----|-----|----|
| 15 TYPE, VALUE, FREQ, ABORT LIMIT: | 2. | 40. | 0.5 | 7. |
| 16 TYPE, VALUE, FREQ, ABORT LIMIT: | 3. | 60. | 1.3 | 6. |
| 17 TYPE, VALUE, FREQ, ABORT LIMIT: | 2. | 60. | 50. | 4. |
| 18 TEST LEVEL (DB BELOW REF):      | 1. |     |     |    |

## ACCELERATION SIGNALS:

19 NR OF SIGNALS: 2.  
 CHANNEL NRS: 1. 2.  
 20 1=PEAK, 0=RMS: 0.  
 21 SENSITIVITY, MV/G: 20.  
 22 STRATEGY 1=MAX, 0=AVG: 1.

## LIMIT SIGNALS:

23 NR OF SIGNALS: 0.

## ABORT LINES:

24 NR OF LINES: 0.

## ALARM LINES:

25 NR OF LINES: 0.  
 26 1=DUAL-CHANNEL A/D, 0=ACE: 1.  
 27 COMPRESSION SPEED 2=HIGH, 1=NORMAL, 0=LOW: 1.



## POST-TEST DOCUMENTATION

TRAIN TRACK TRANS 8000LB OUT PHASE RUN 23 3/20/75

COMPLETION STATUS: ABORTED DURING SWEEP 1 AT 34.93 HZ.  
MAXIMUM DRIVE LIMIT.

TEST DURATION -- HRS, MIN, SEC: 0 3 3

MAX ABS CONTROL ERROR: 2.74 DB AT 23.64 HZ.

AVG ABS CONTROL ERROR: .6173 DB.

CONTROL  
CHANNEL FREQ RANGE (HZ)

SWEEP 1

|   |       |    |       |
|---|-------|----|-------|
| 2 | .5    | -- | 2.841 |
| 1 | 2.841 | -- | 10.63 |
| 2 | 10.63 | -- | 11.06 |
| 1 | 11.06 | -- | 11.98 |
| 2 | 11.98 | -- | 12.54 |
| 1 | 12.54 | -- | 12.64 |
| 2 | 12.64 | -- | 13.28 |
| 1 | 13.28 | -- | 13.37 |
| 2 | 13.37 | -- | 13.8  |
| 1 | 13.8  | -- | 13.94 |
| 2 | 13.94 | -- | 14.32 |
| 1 | 14.32 | -- | 14.38 |
| 2 | 14.38 | -- | 14.8  |
| 1 | 14.8  | -- | 14.9  |
| 2 | 14.9  | -- | 15.19 |
| 1 | 15.19 | -- | 15.32 |
| 2 | 15.32 | -- | 15.68 |
| 1 | 15.68 | -- | 15.74 |
| 2 | 15.74 | -- | 16.26 |
| 1 | 16.26 | -- | 16.29 |
| 2 | 16.29 | -- | 16.8  |
| 1 | 16.8  | -- | 16.84 |
| 2 | 16.84 | -- | 17.32 |
| 1 | 17.32 | -- | 17.36 |
| 2 | 17.36 | -- | 18.06 |
| 1 | 18.06 | -- | 18.1  |
| 2 | 18.1  | -- | 18.87 |
| 1 | 18.87 | -- | 18.94 |
| 2 | 18.94 | -- | 19.89 |
| 1 | 19.89 | -- | 19.93 |

CONTROL  
CHANNEL FREQ RANGE (HZ)

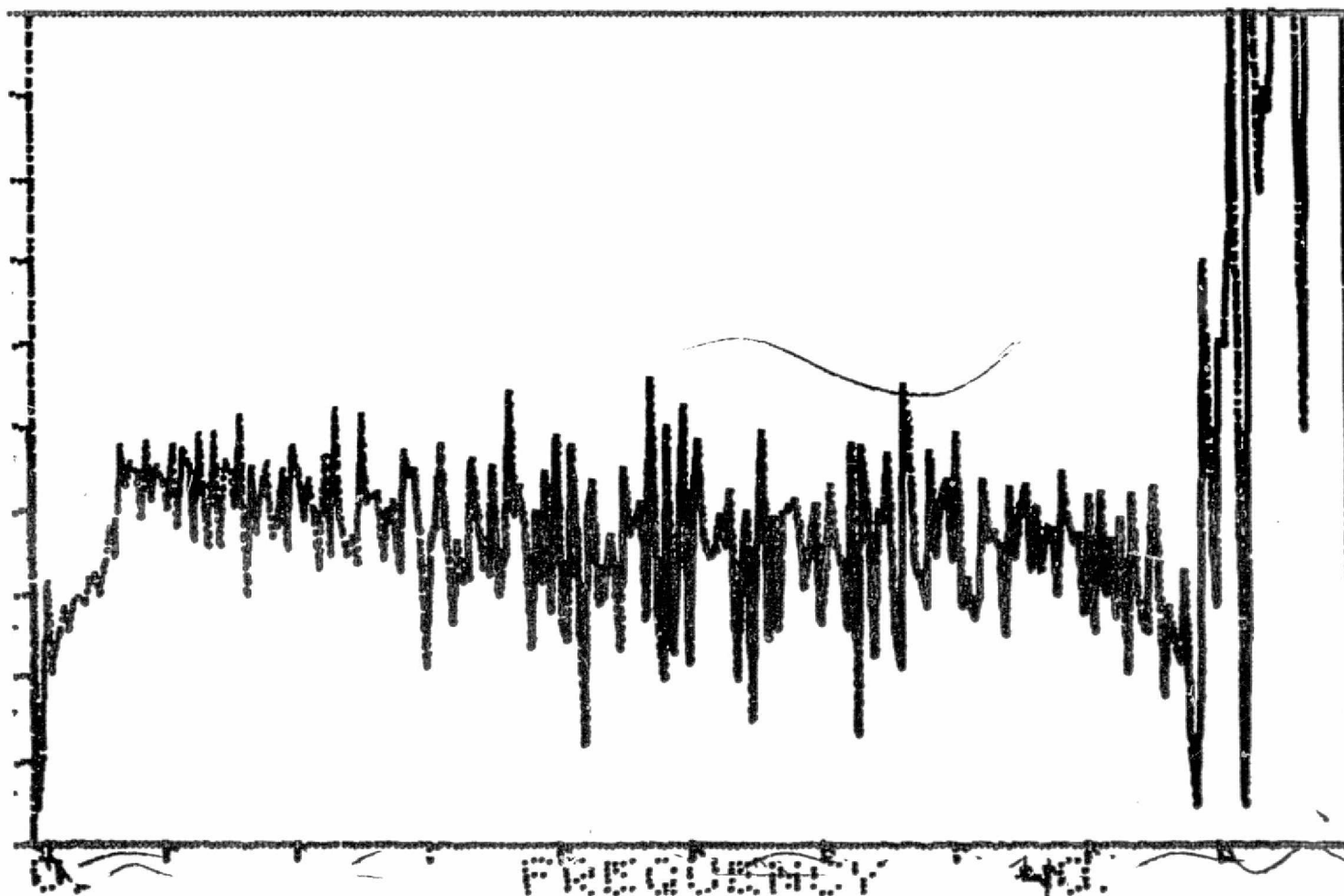
SWEEP 1 (CONTINUED)

|   |       |    |       |
|---|-------|----|-------|
| 2 | 19.93 | -- | 20.43 |
| 1 | 20.43 | -- | 20.47 |
| 2 | 20.47 | -- | 20.68 |
| 1 | 20.68 | -- | 20.7  |
| 2 | 20.7  | -- | 20.87 |
| 1 | 20.87 | -- | 20.91 |
| 2 | 20.91 | -- | 21.34 |
| 1 | 21.34 | -- | 21.36 |
| 2 | 21.36 | -- | 21.51 |
| 1 | 21.51 | -- | 21.55 |
| 2 | 21.55 | -- | 21.57 |
| 1 | 21.57 | -- | 21.61 |
| 2 | 21.61 | -- | 22.14 |
| 1 | 22.14 | -- | 22.18 |
| 2 | 22.18 | -- | 22.79 |
| 1 | 22.79 | -- | 22.96 |
| 2 | 22.96 | -- | 23.4  |
| 1 | 23.4  | -- | 23.49 |
| 2 | 23.49 | -- | 25.36 |
| 1 | 25.36 | -- | 25.41 |
| 2 | 25.41 | -- | 26.47 |
| 1 | 26.47 | -- | 26.98 |
| 2 | 26.98 | -- | 27.36 |
| 1 | 27.36 | -- | 27.69 |
| 2 | 27.69 | -- | 28.23 |
| 1 | 28.23 | -- | 28.6  |
| 2 | 28.6  | -- | 29.54 |
| 1 | 29.54 | -- | 29.84 |
| 2 | 29.84 | -- | 34.93 |

2

MAON

0.



COMPLEX

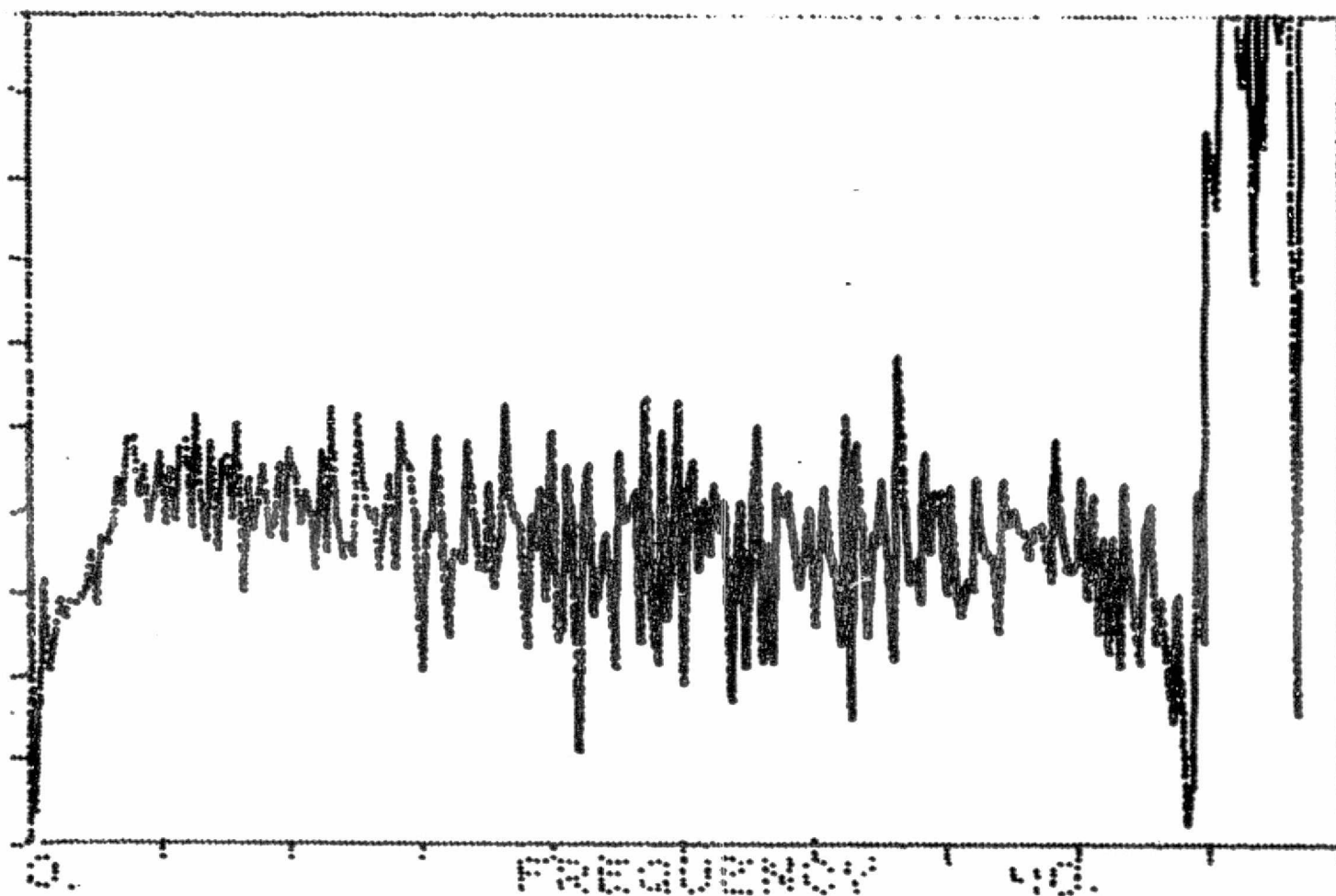
SIZE= 256

FL1/DRIVE

a.

naon

a.



COMPLEX

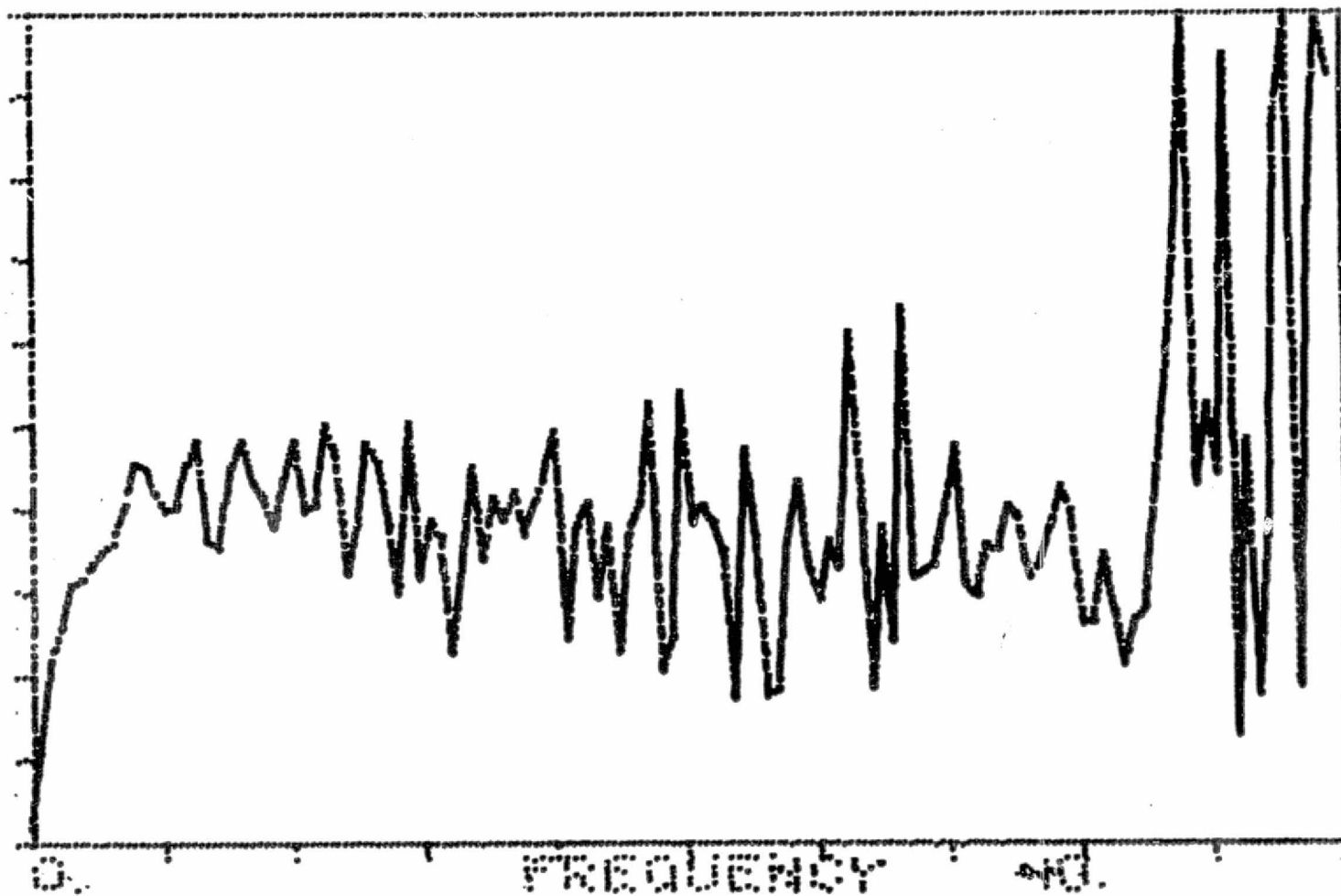
SIZE= 255

FL1/DRIVE

3.

MAON

0.



COMPLEX

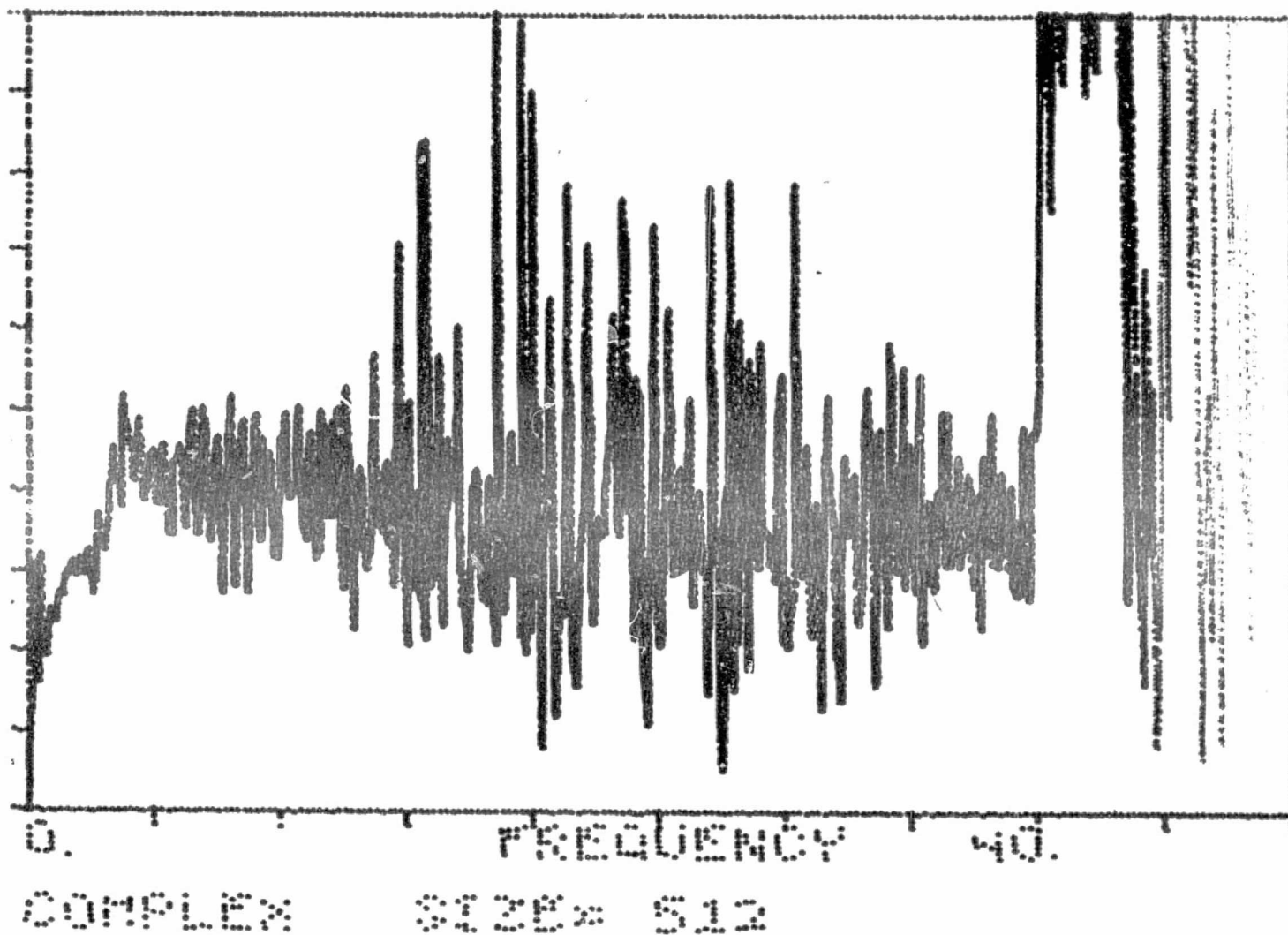
SIZE= 128

FL1/DRIVE

a.

MAGN

a.



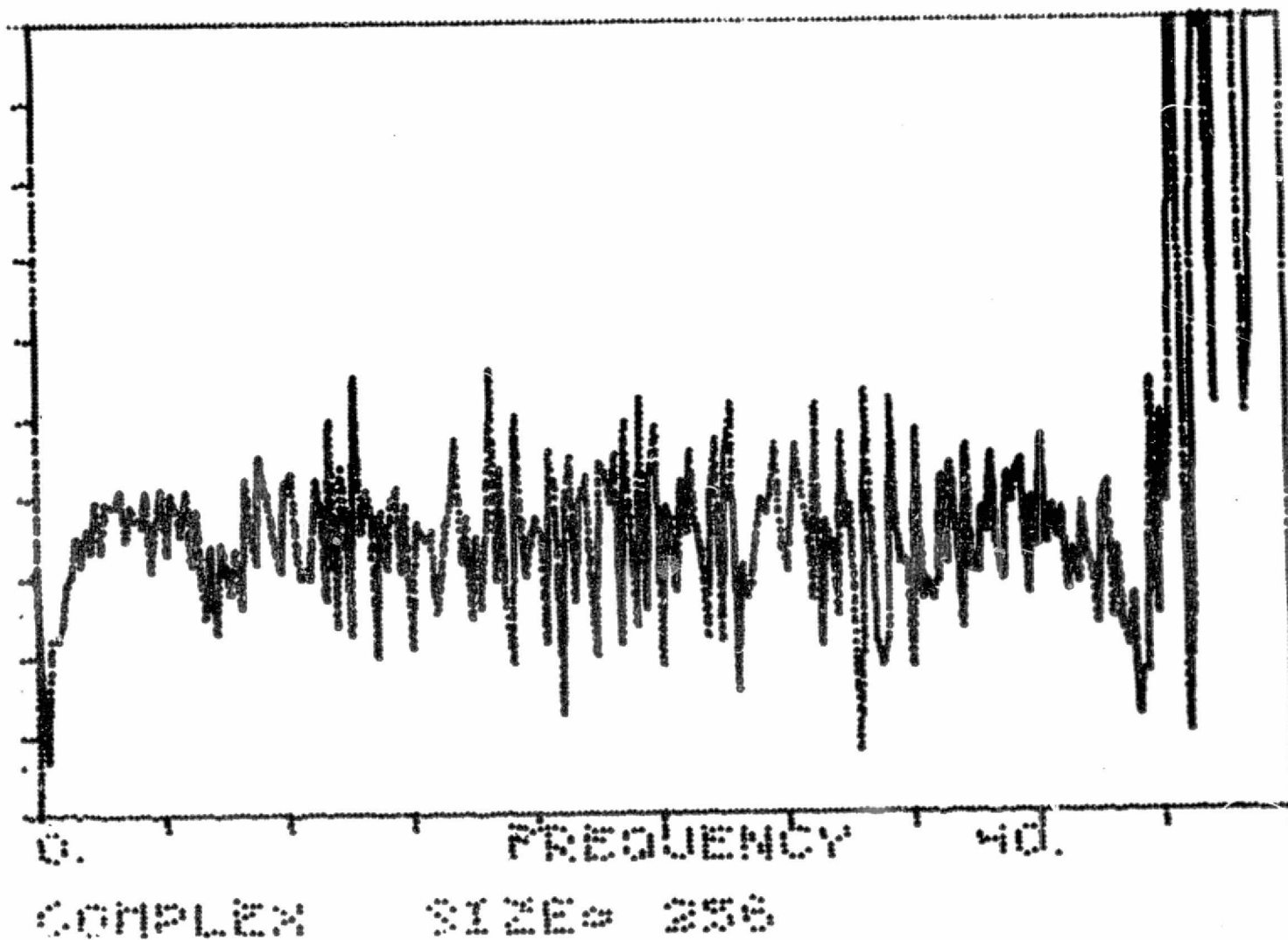
FL1/DRIVE



a.

MAGN

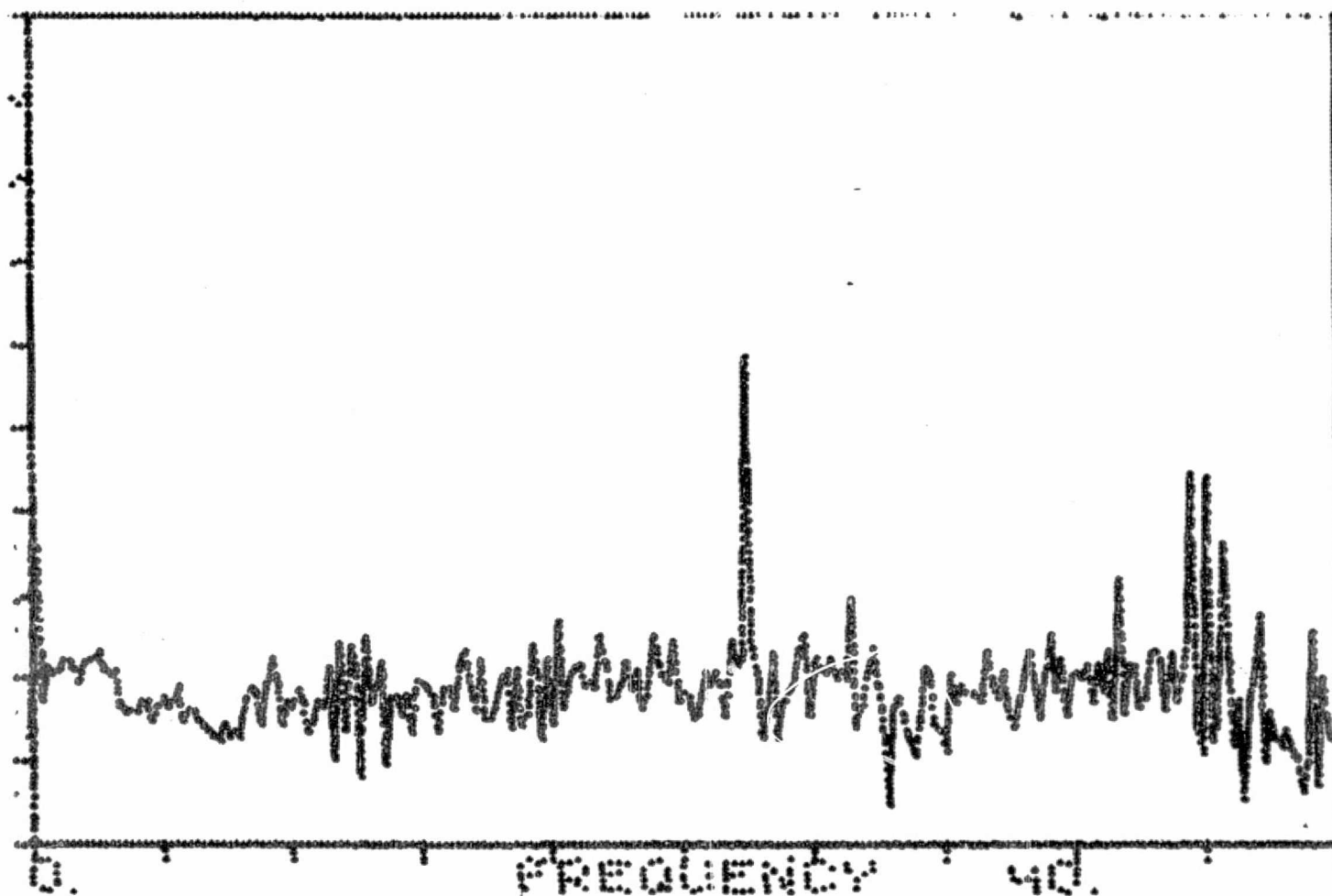
a.



8.

1.76N

0.



COMPLEX

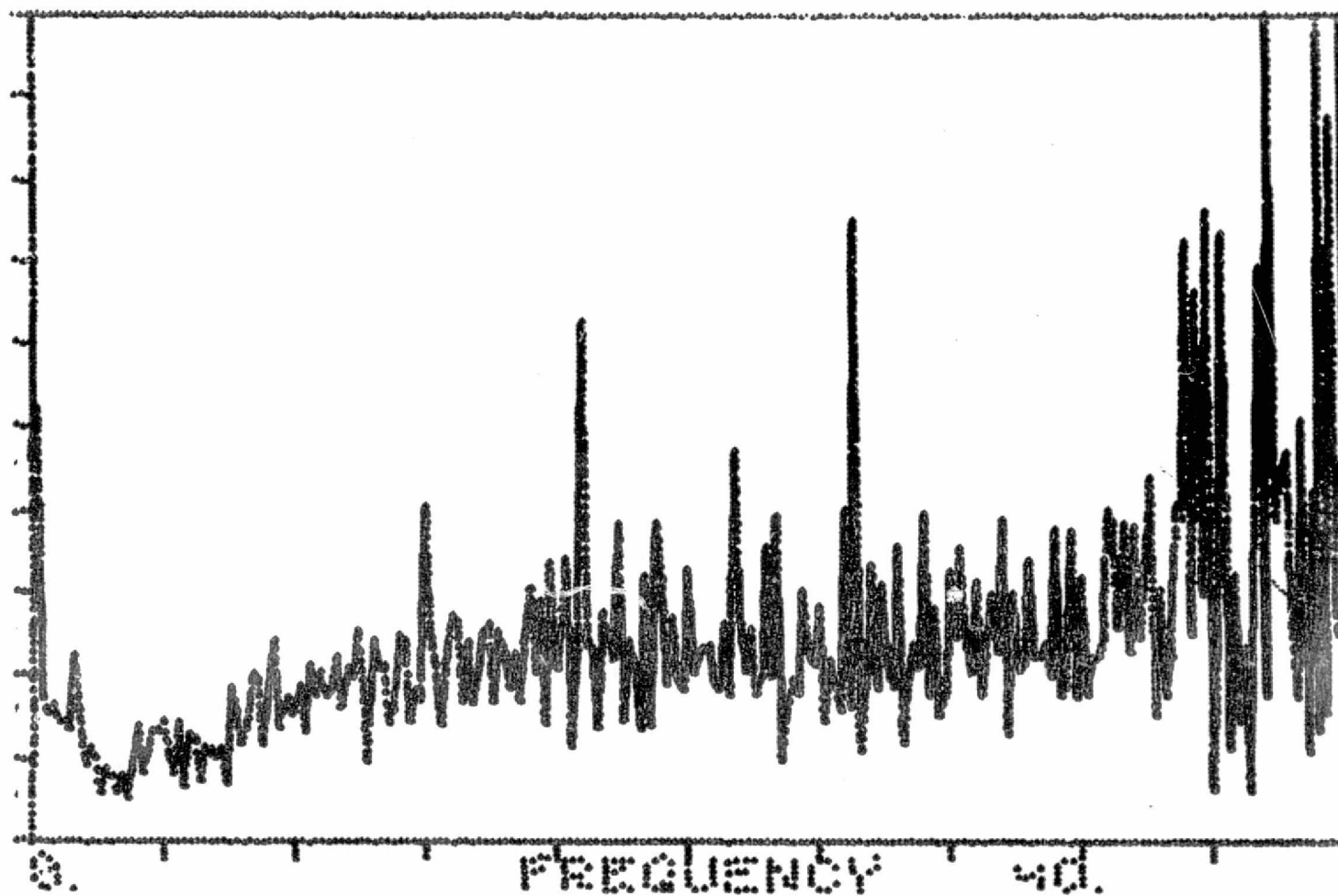
SIZE= 256

FL2/FL1

a.

HASH

a.



COMPLEX

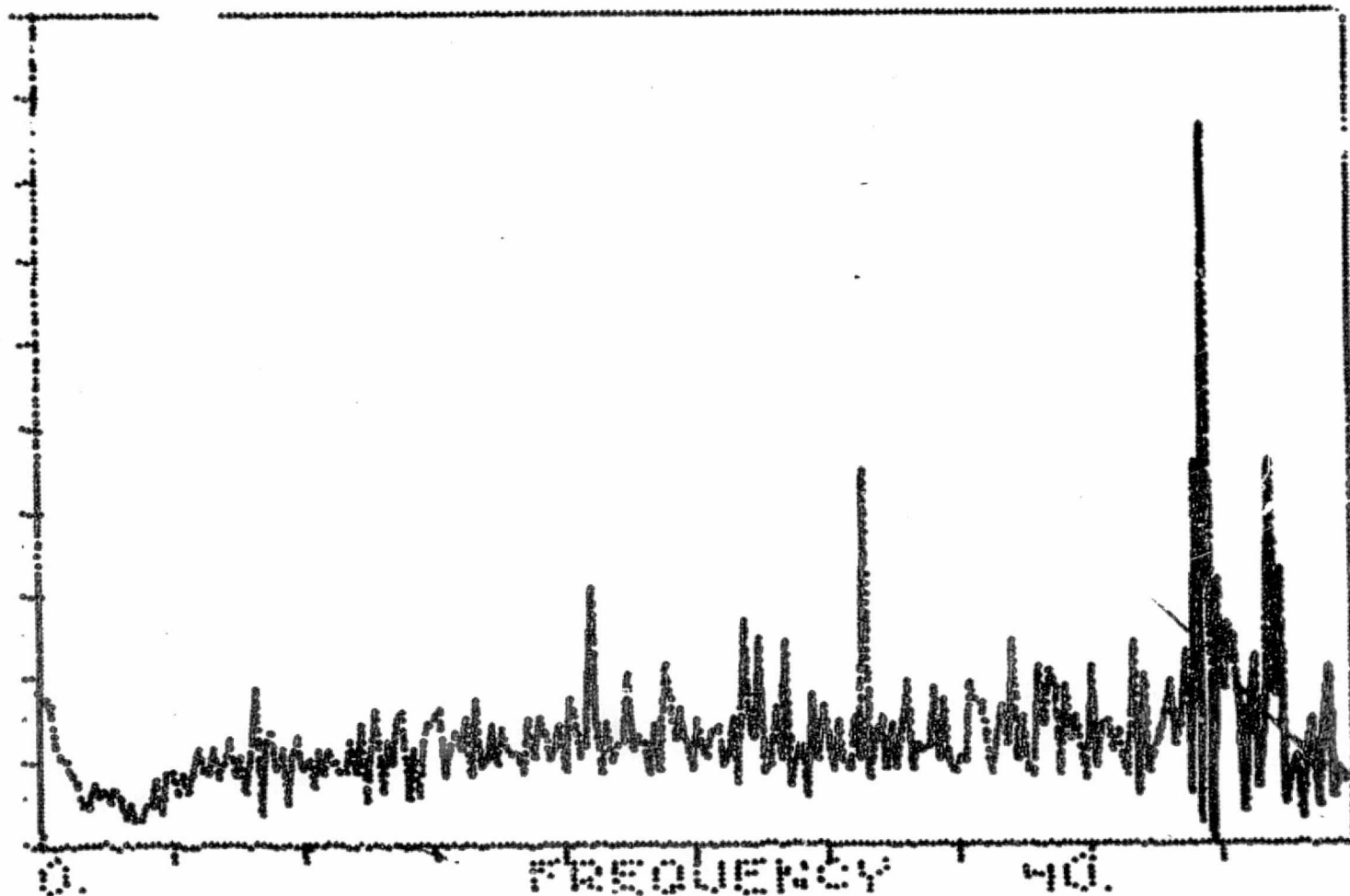
SIZE= 256

FV2/FL1

5.

HP6K

0.



COMPLEX

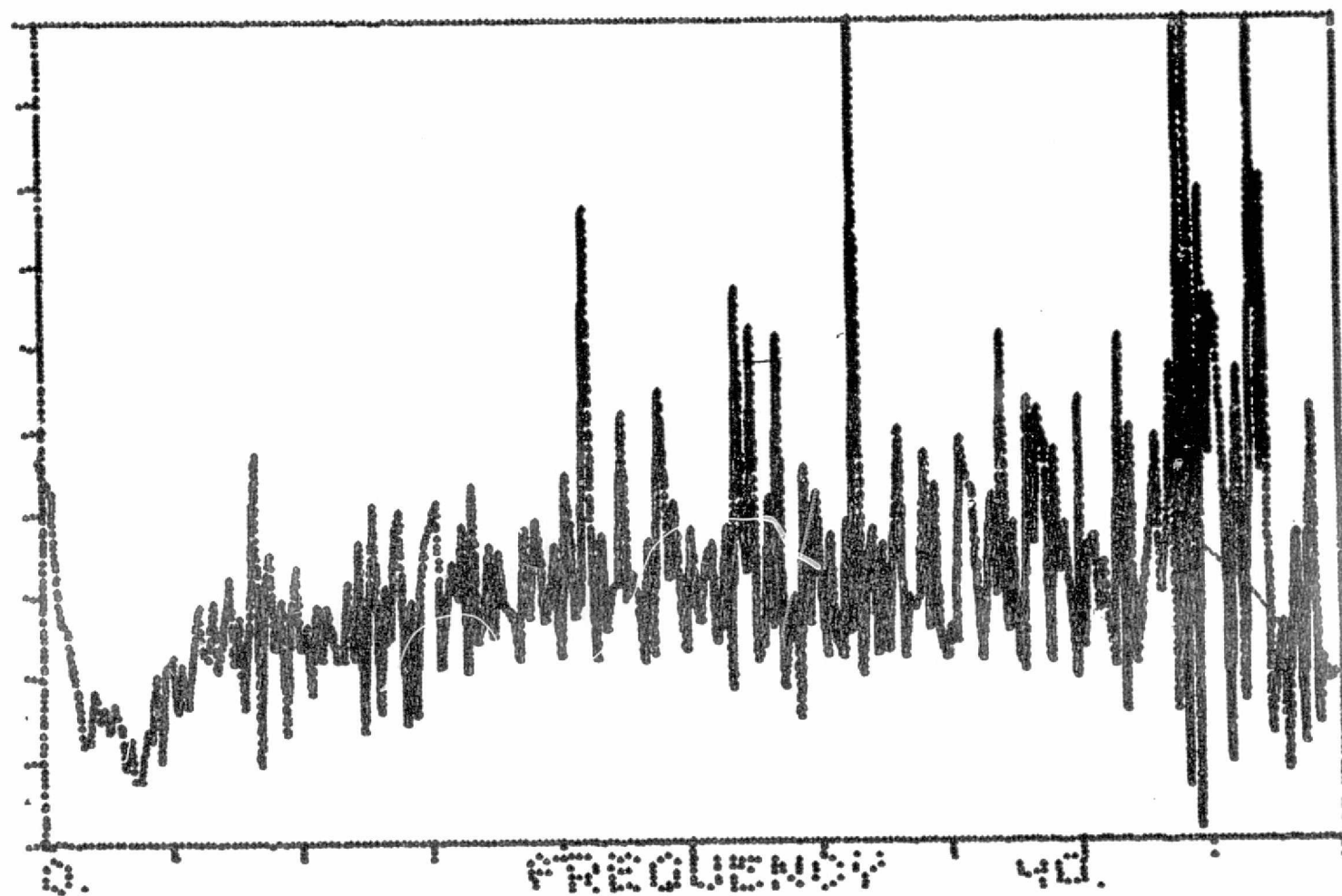
SIZE\* 256

FV3/FL1

2.

MAGN

0.



COMPLEX

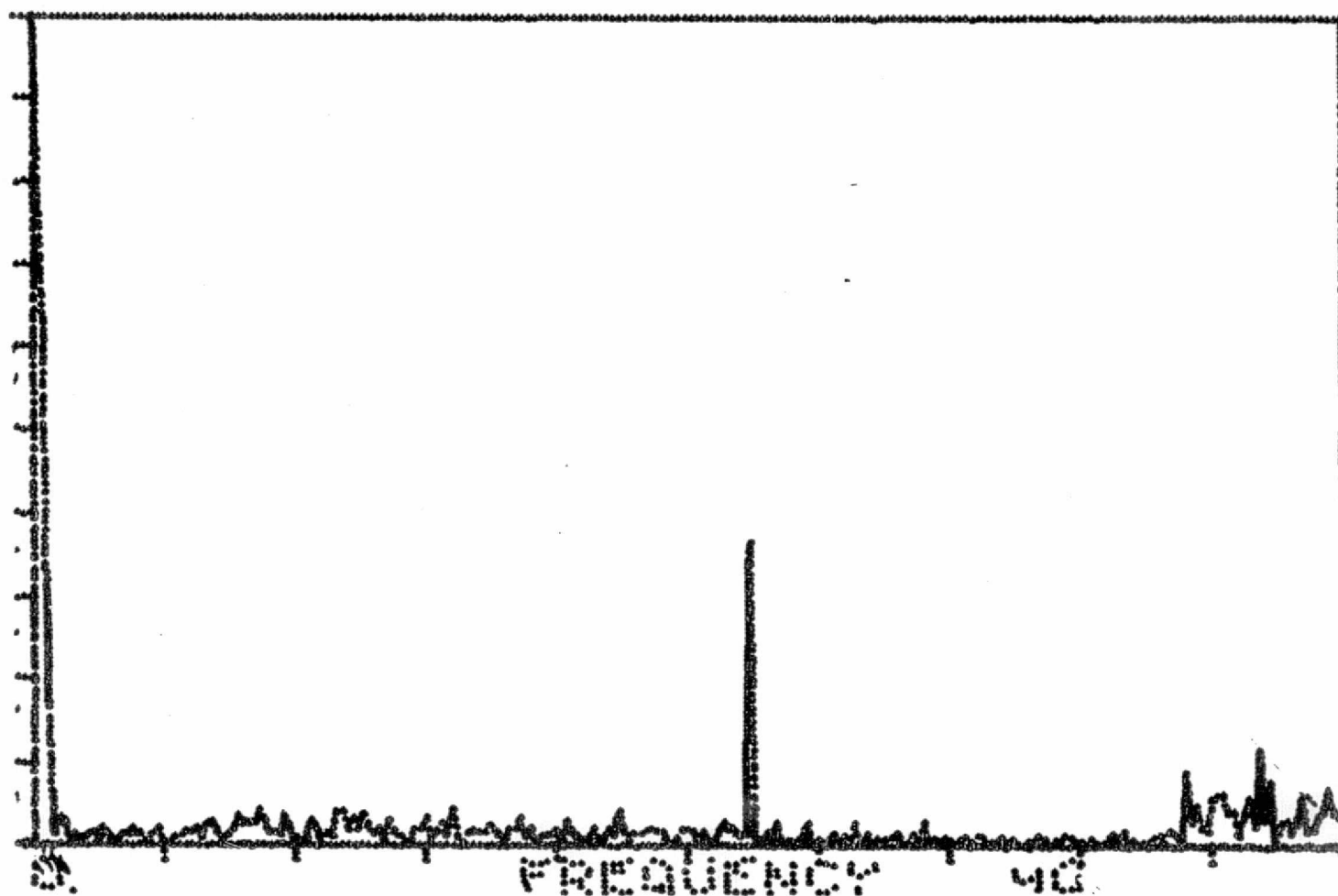
SIZE= 256

FV3/FL1

3.

1804

0.



COMPLEX

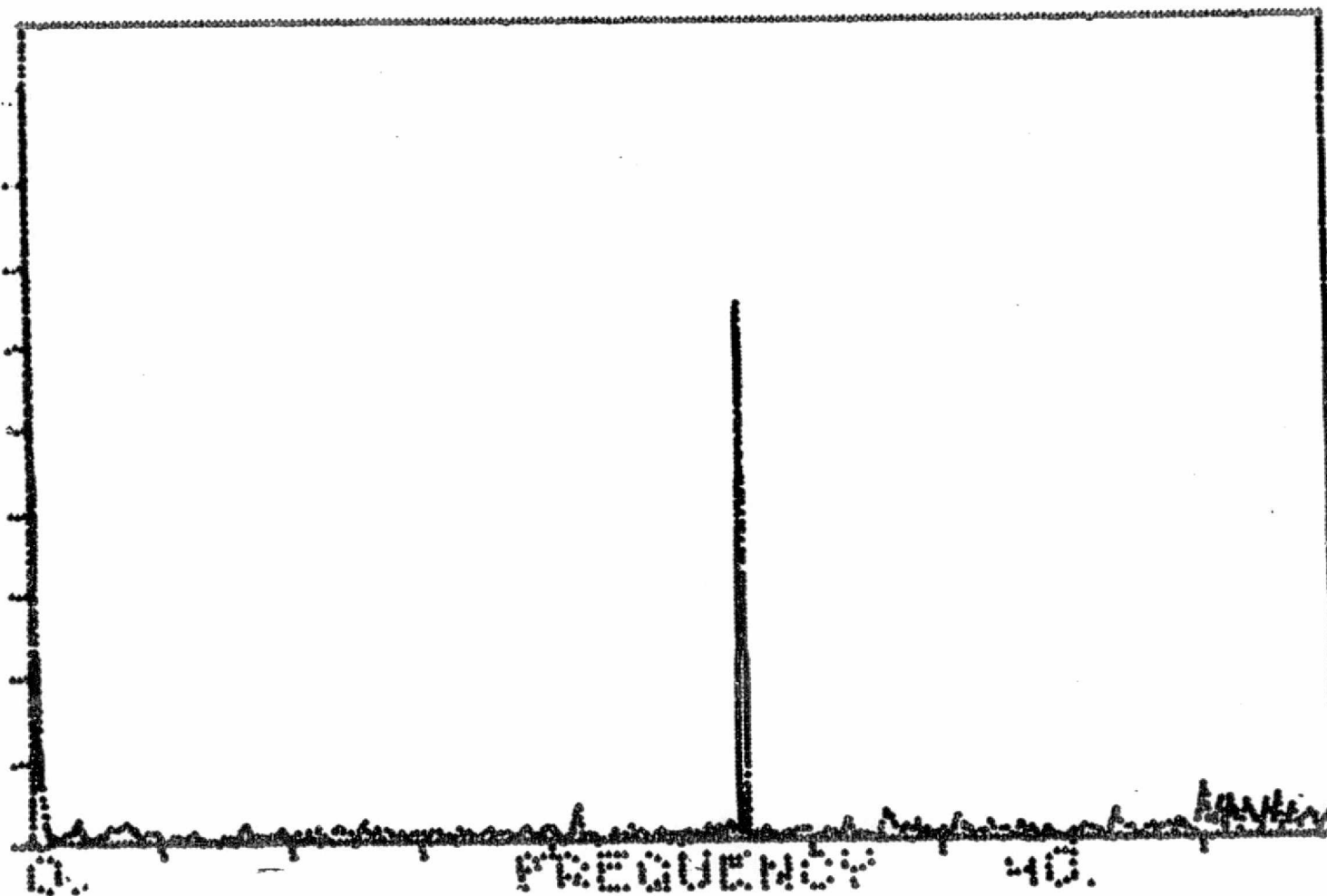
SIZE= 256

DV1/FL1

1.

1200

0.



COMPLEX

SIZE= 256

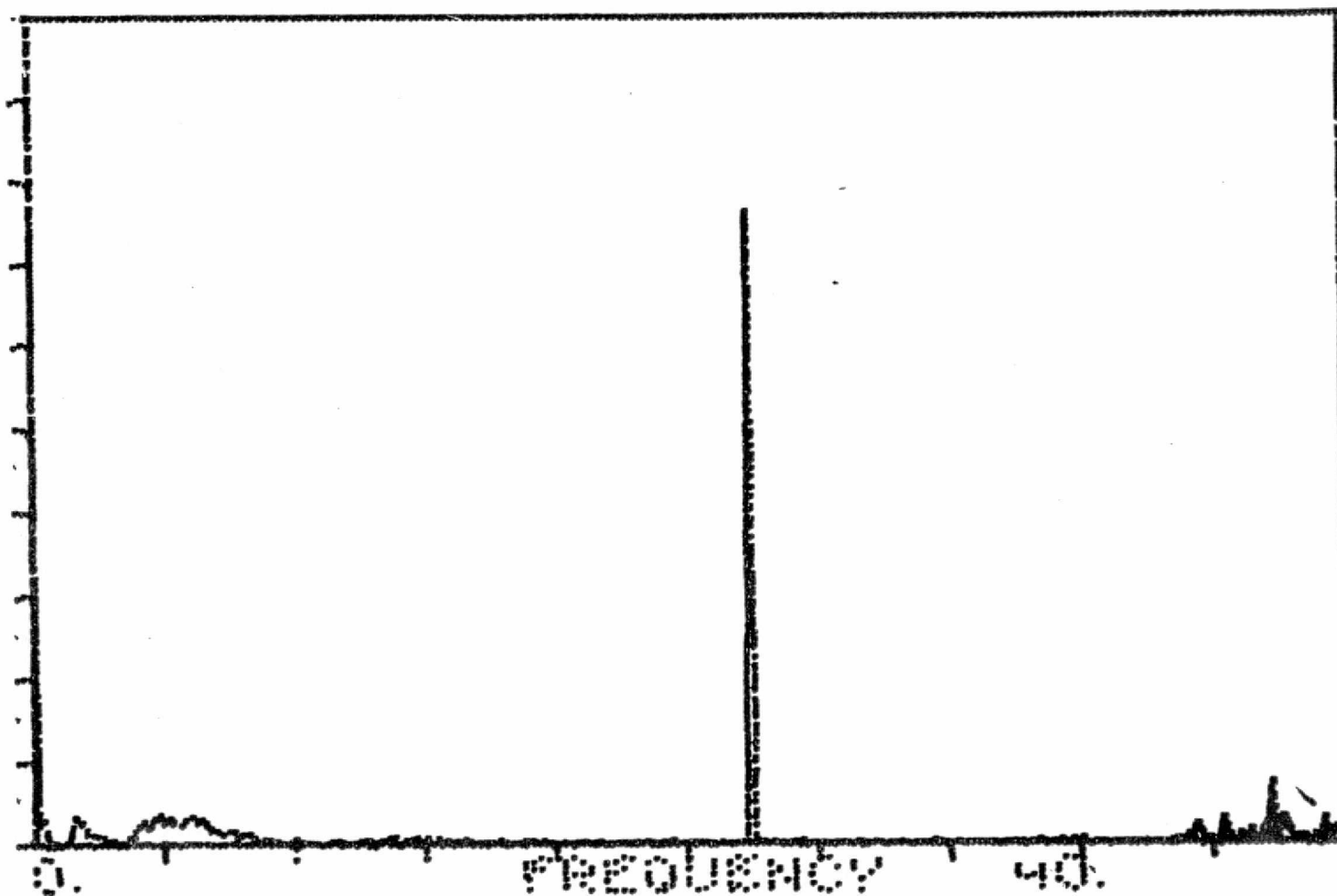
DV2/FL1



2.

MAON

0.



COMPLEX

SIZE= 258

1.

MAON

0.

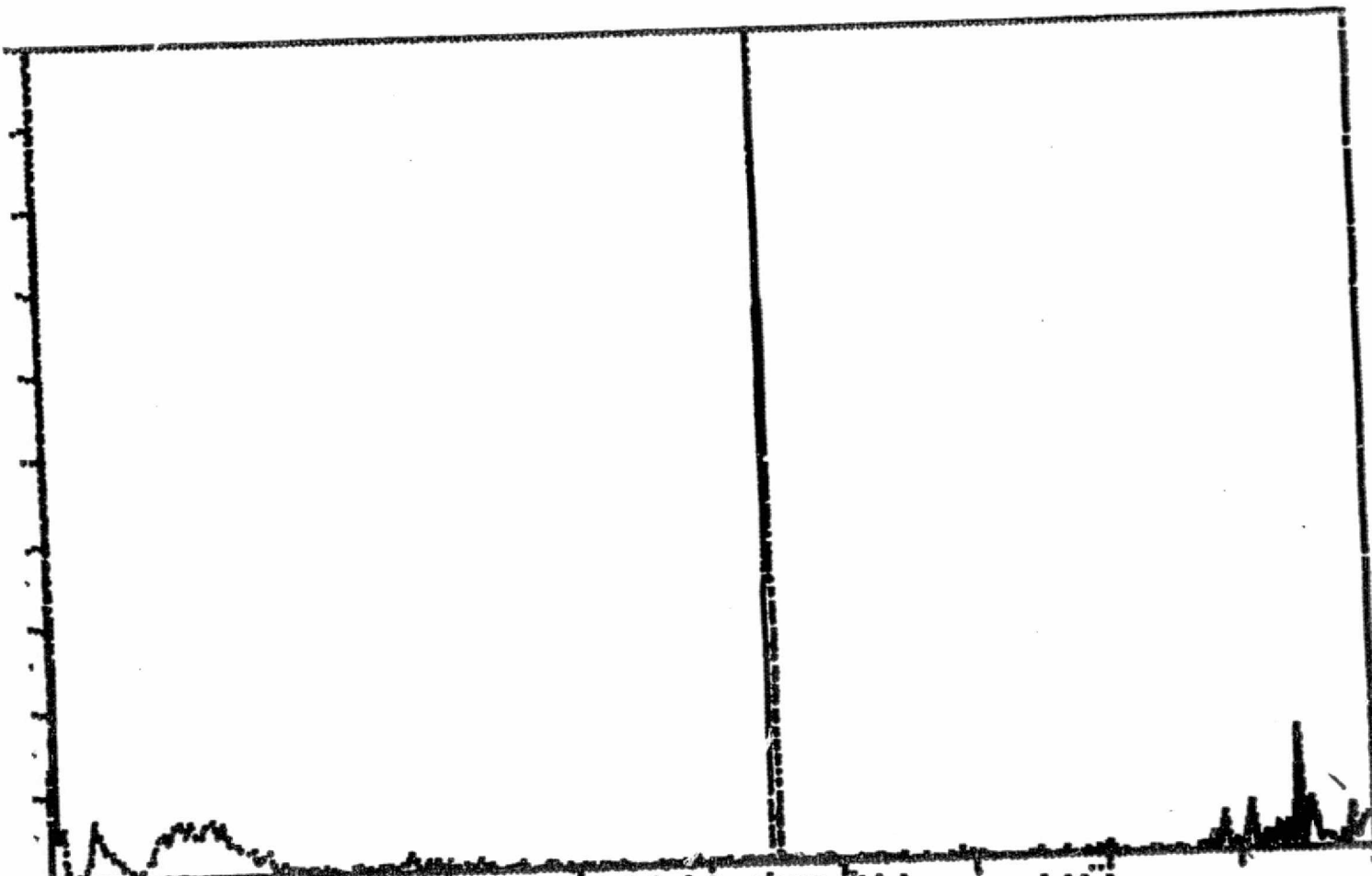
0.

COMPLEX

SIZE= 256

FREQUENCY

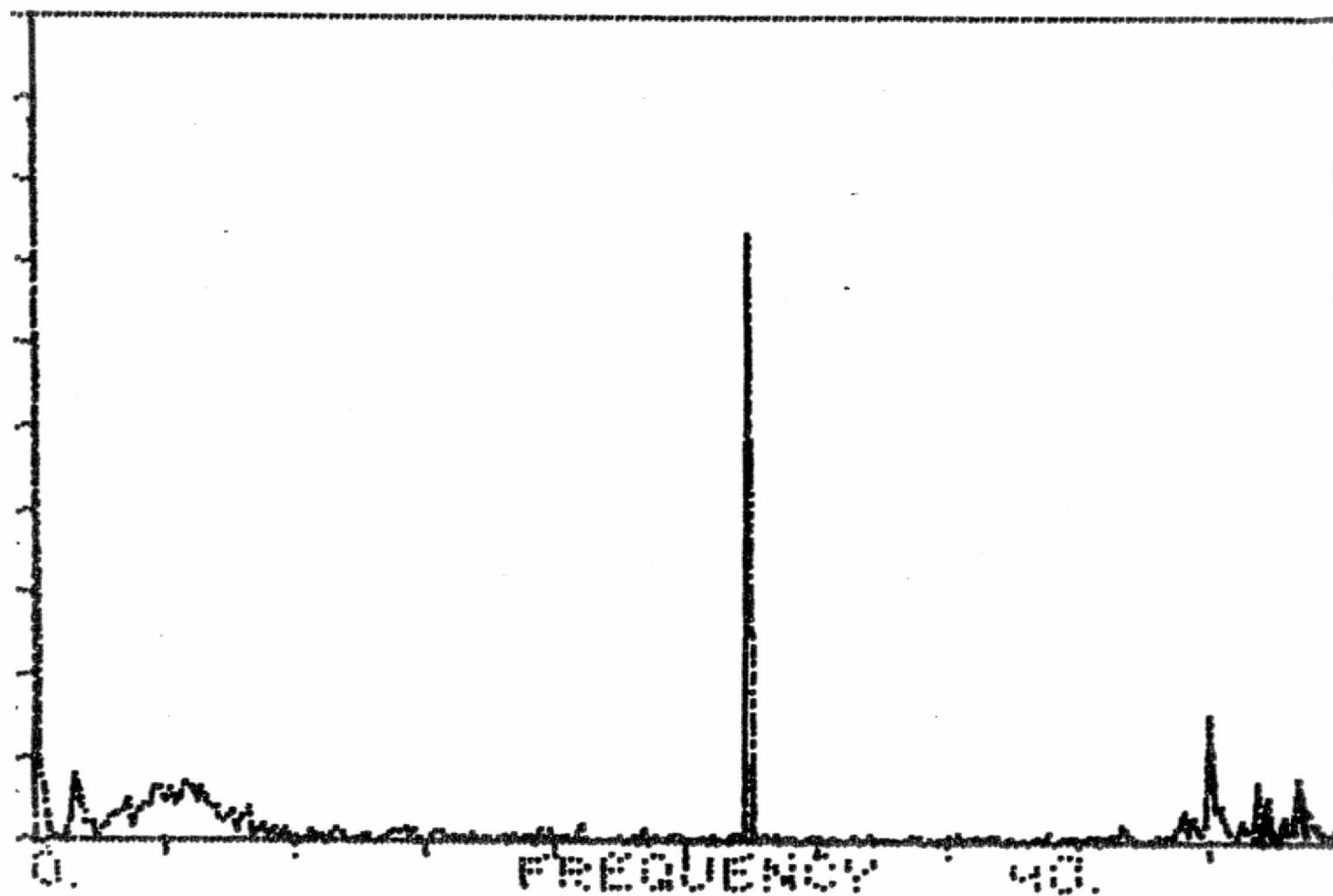
40.



1.

MAON

0.



COMPLEX

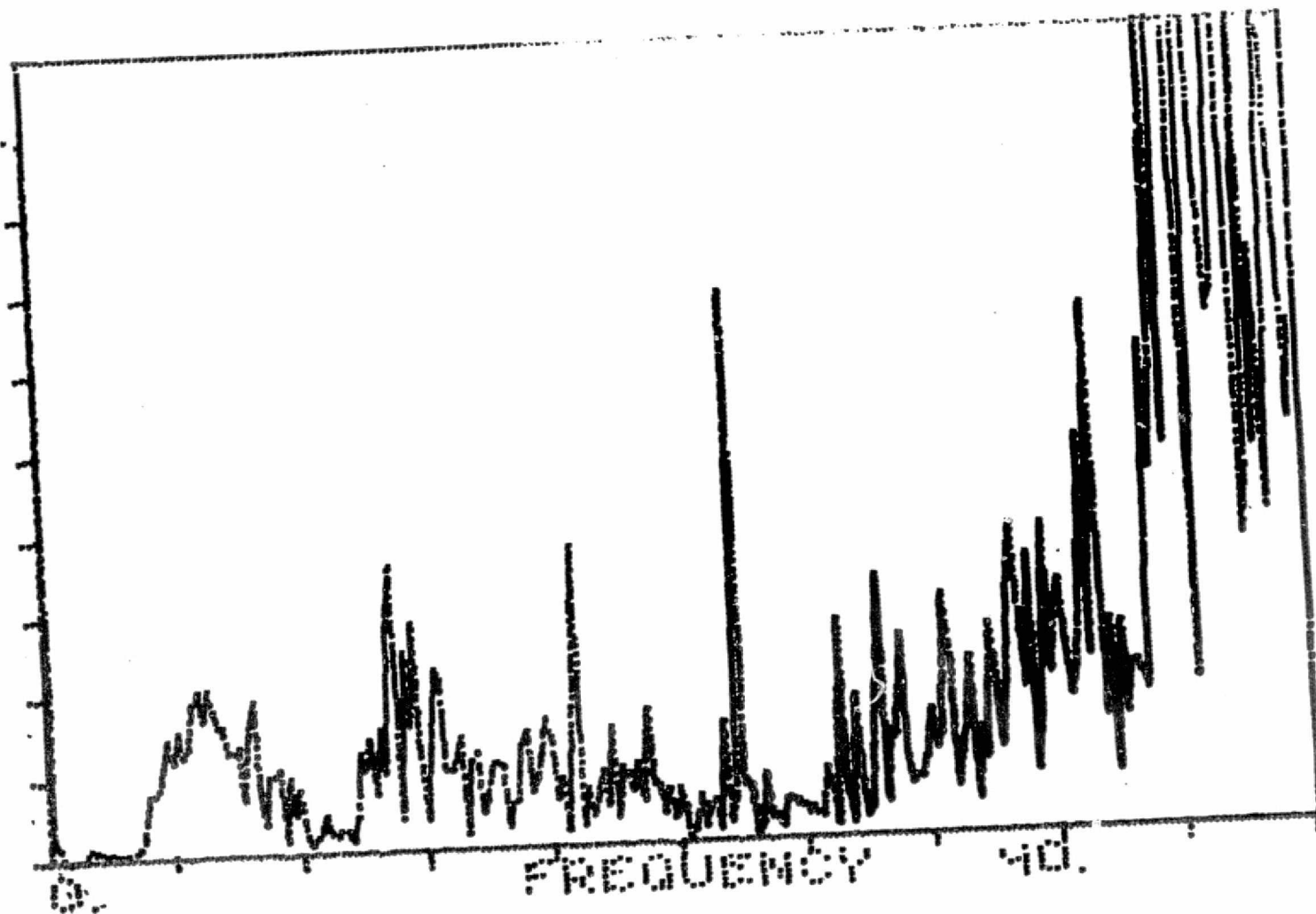
SIZE= 256

DV4/FL1

3.

mag

0.



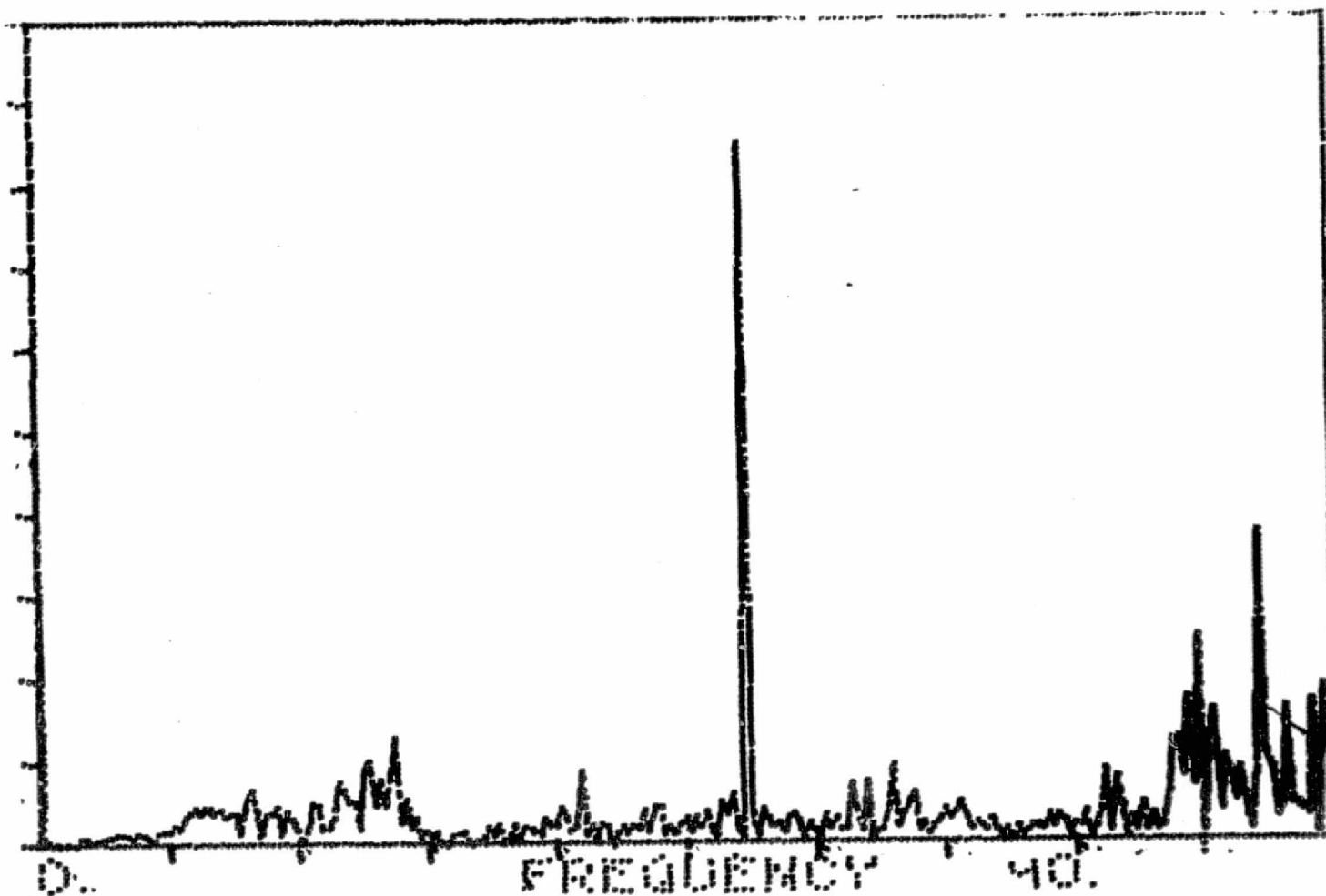
COMPLEX SIZE= 256

AV1/FL1

2.

PACK

a.



COMPLEX

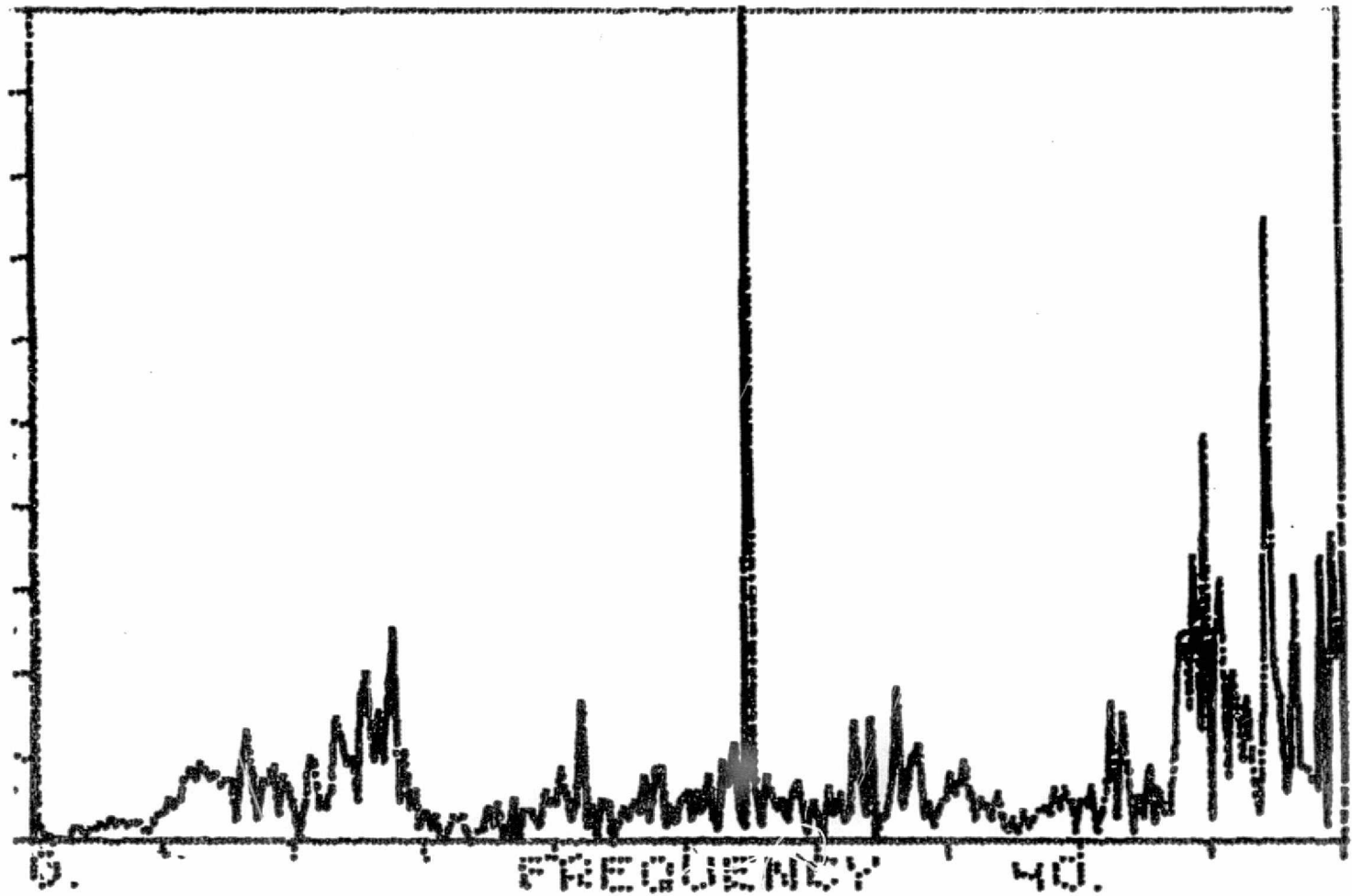
SIZE= 256

AV2/FL1

1.

NR64

0.



COMPLEX

SIZE= 256

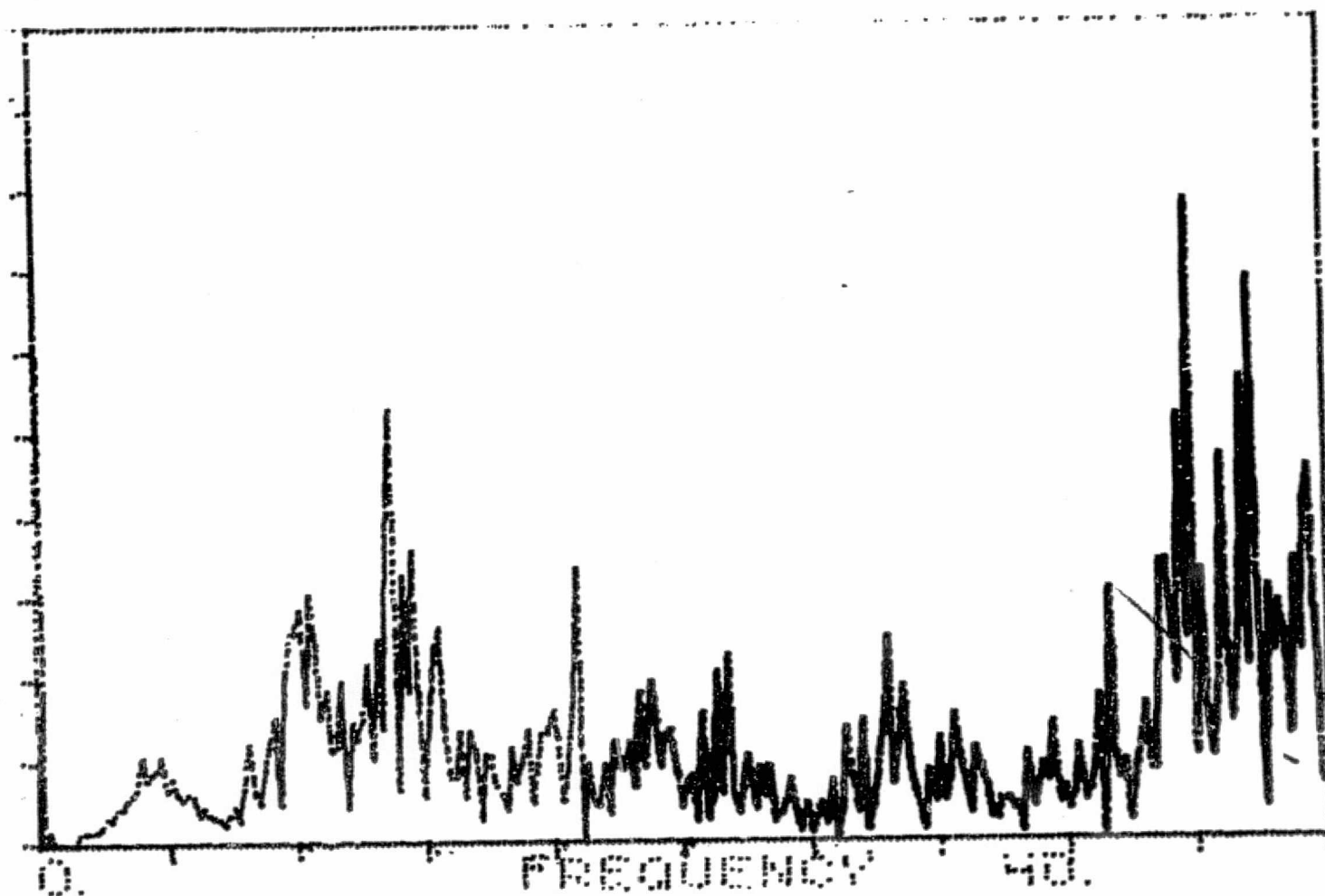
AV2/FL1



1.

MAGN

0.



COMPLEX

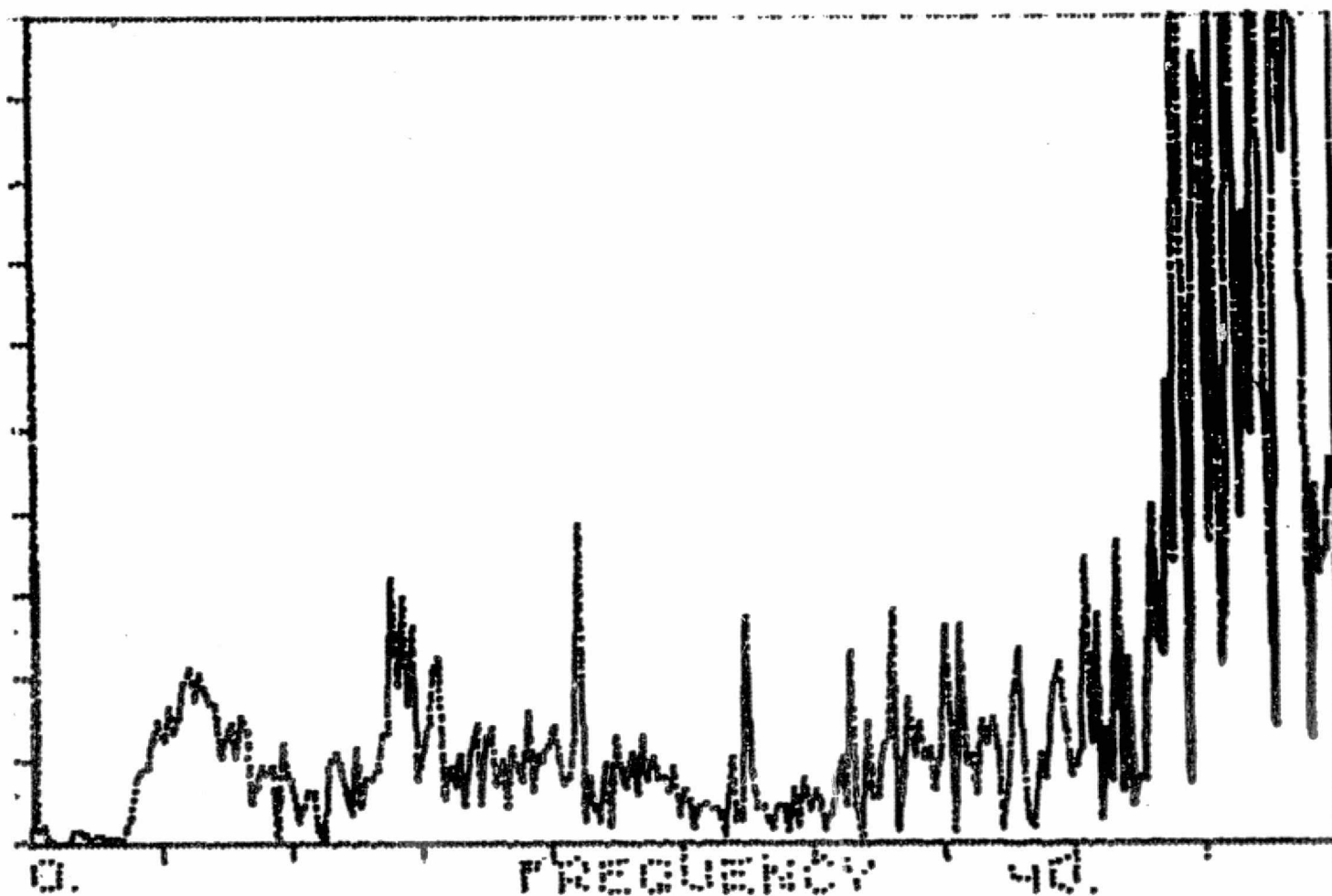
SIZE= 256

AV3/FL1

1.

MAGN

0.



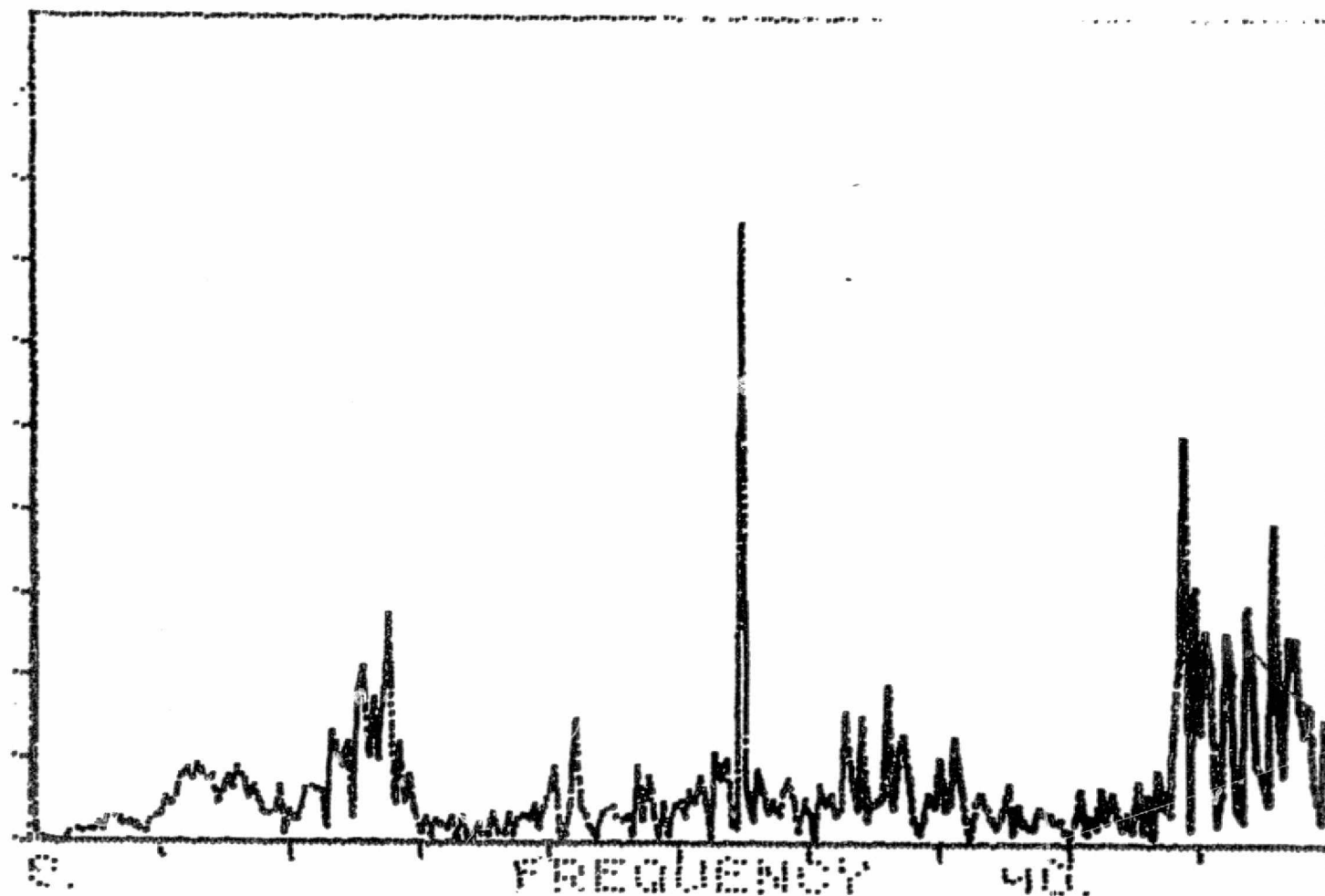
COMPLEX

SIZE= 356

a.

11404

0.



COMPLEX

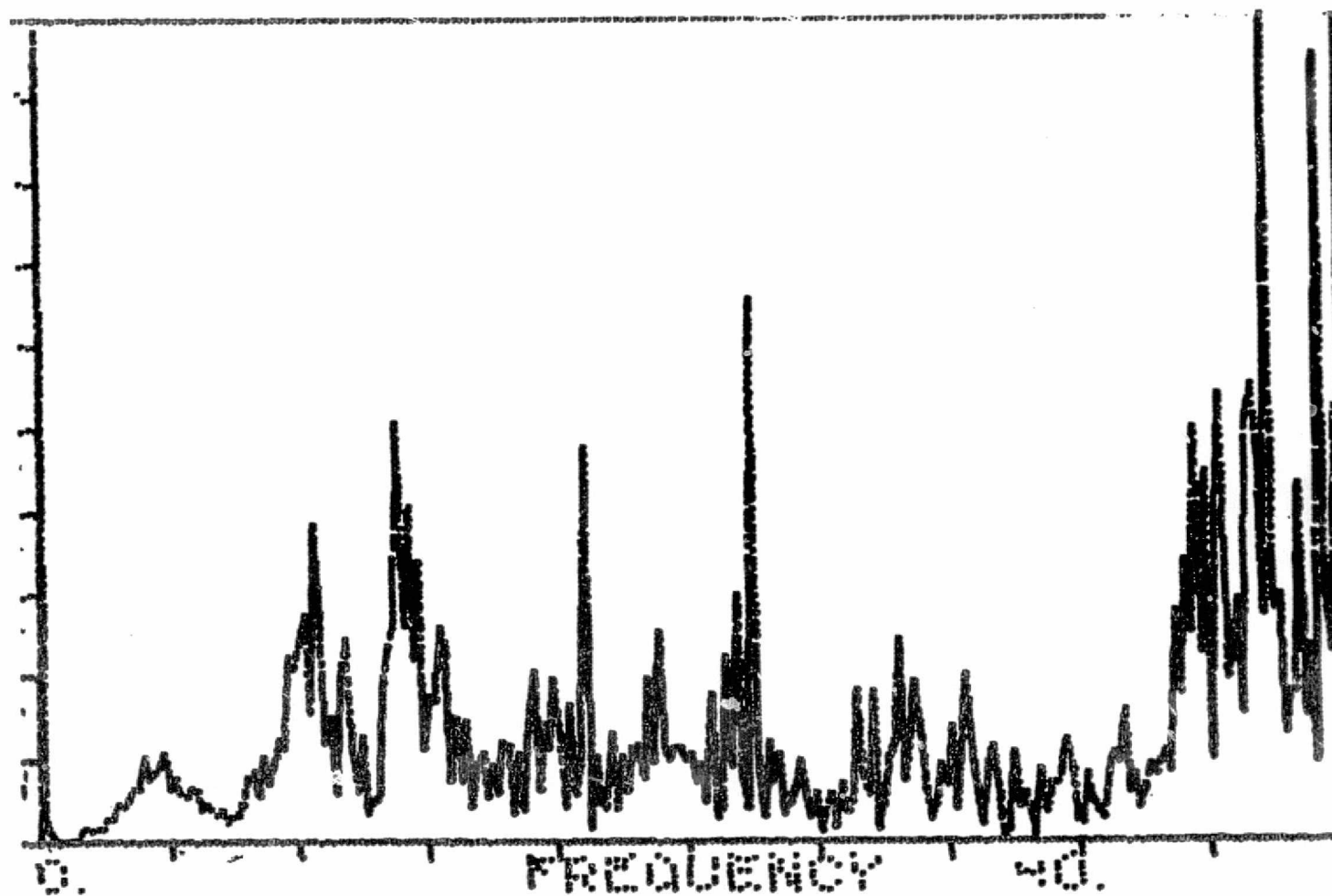
SIZE= 256

AV5/FL1

3.

MAGN

0.



COMPLEX

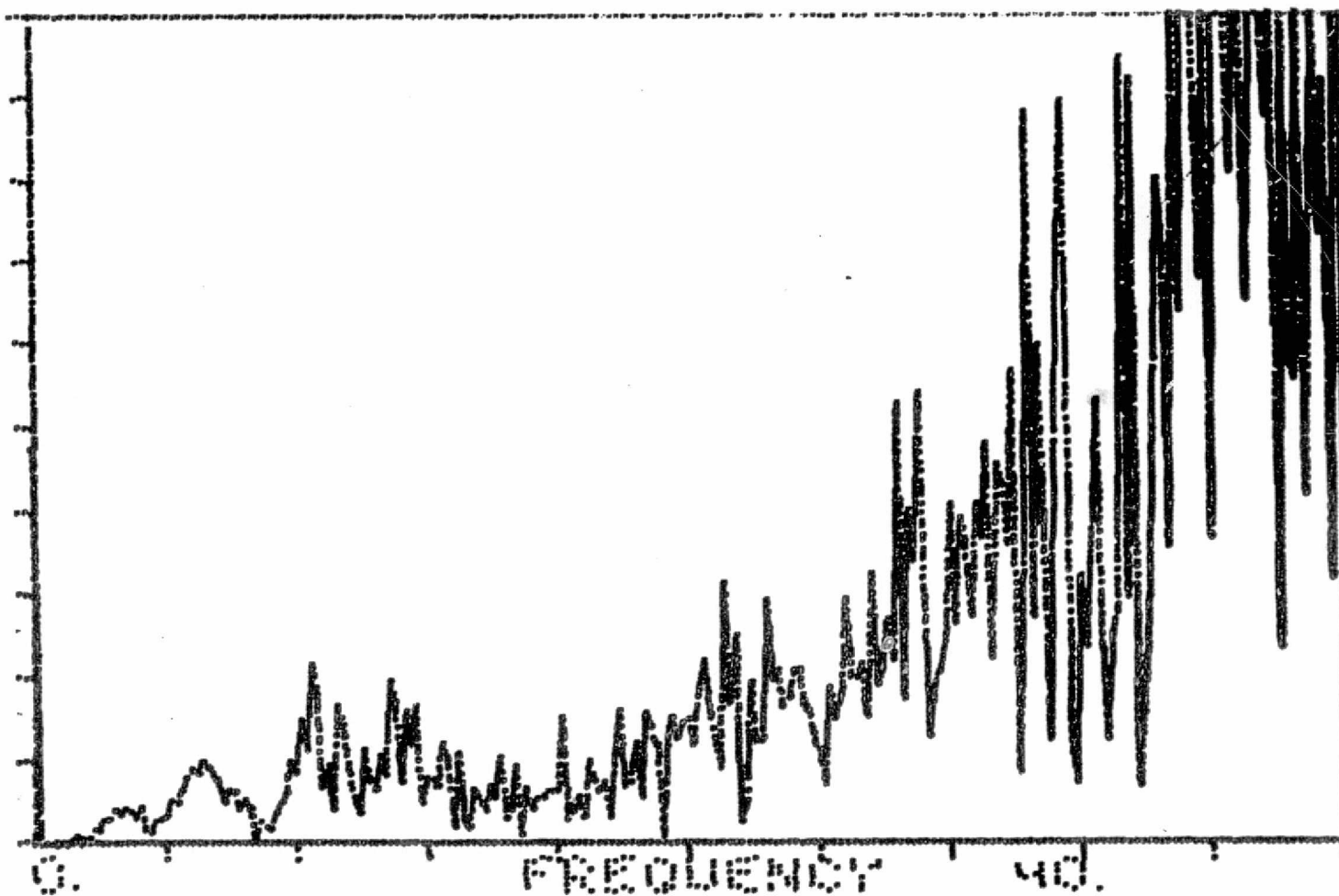
SIZE= 256

AV6/FL1

2.

PACK

0.



CONPLEX

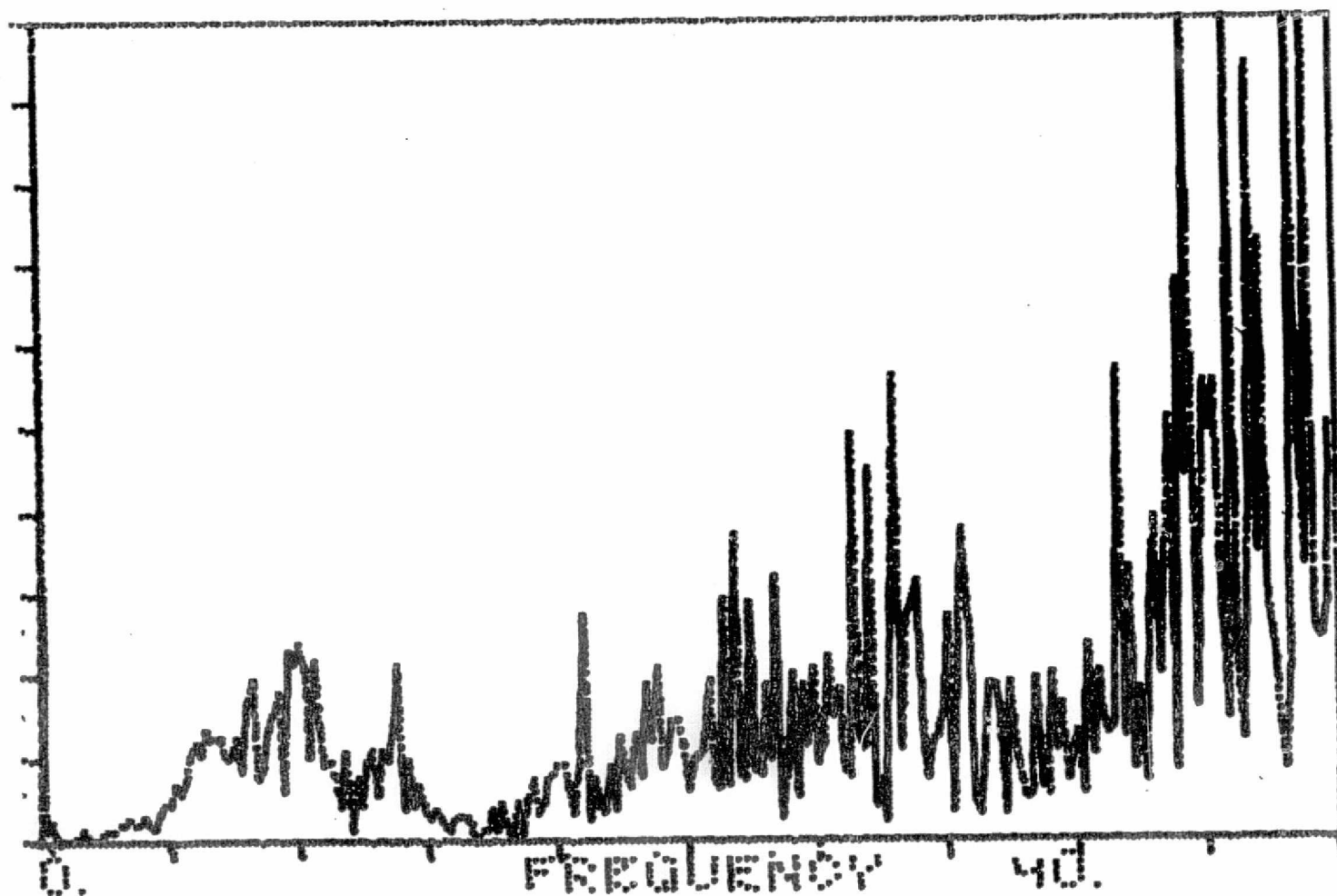
SIZE= 256

AL1/FL1

3.

HP6N

0.



COMPLEX

SIZE= 256

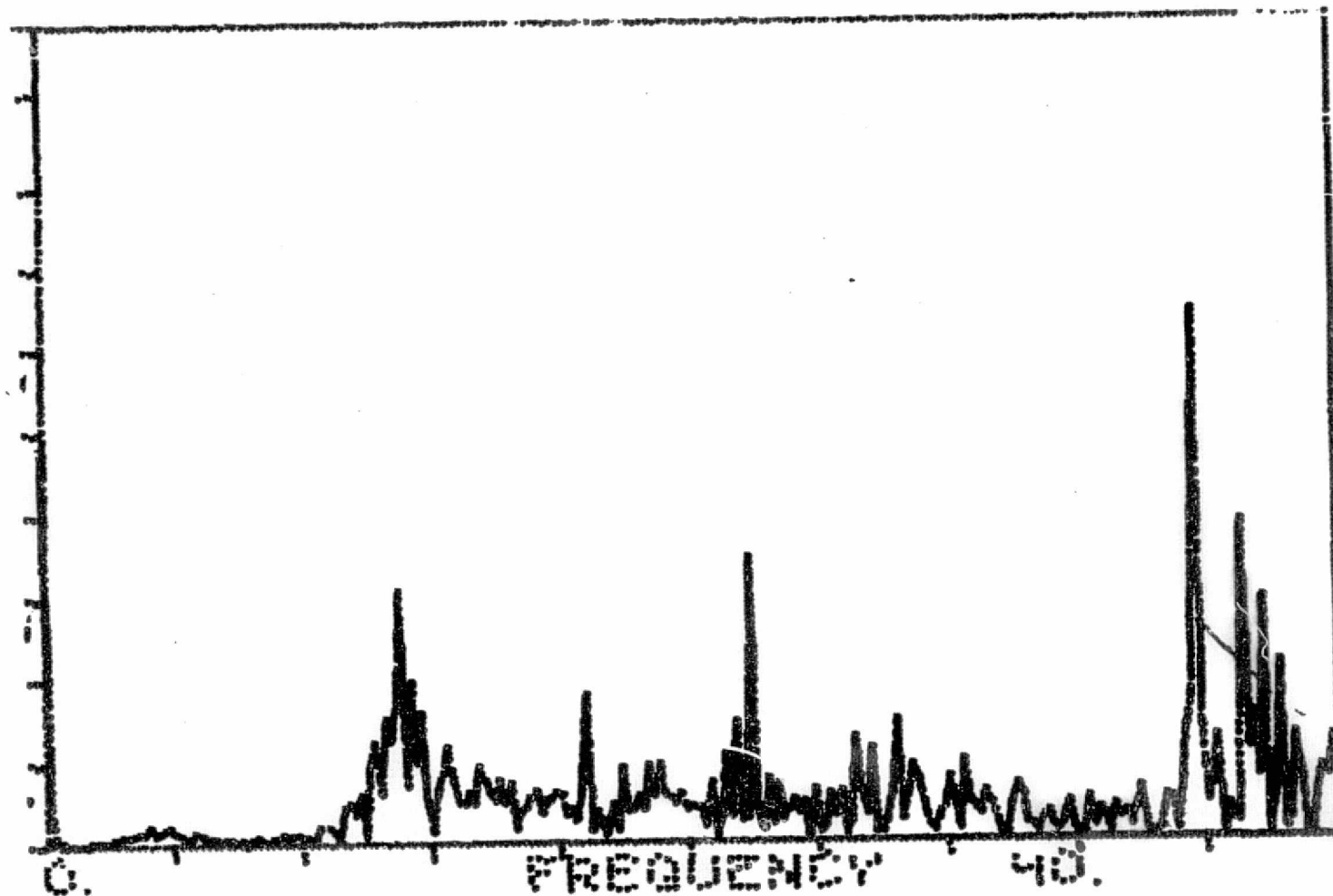
AL2/FL1



2.

MAGN

0.



COMPLEX

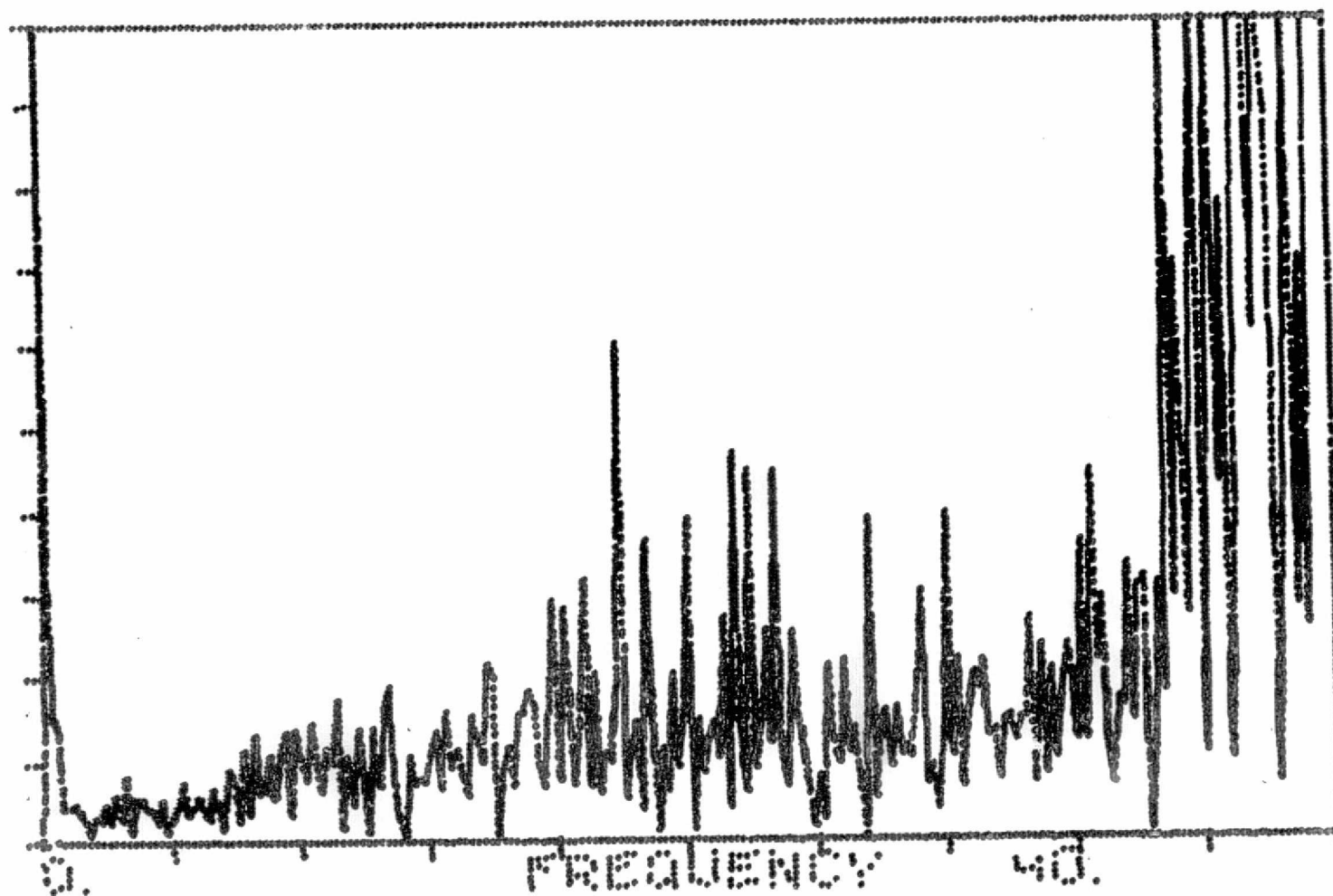
SIZE= 256

AL3/FL1

10.

HIGH

0.



COMPLEX

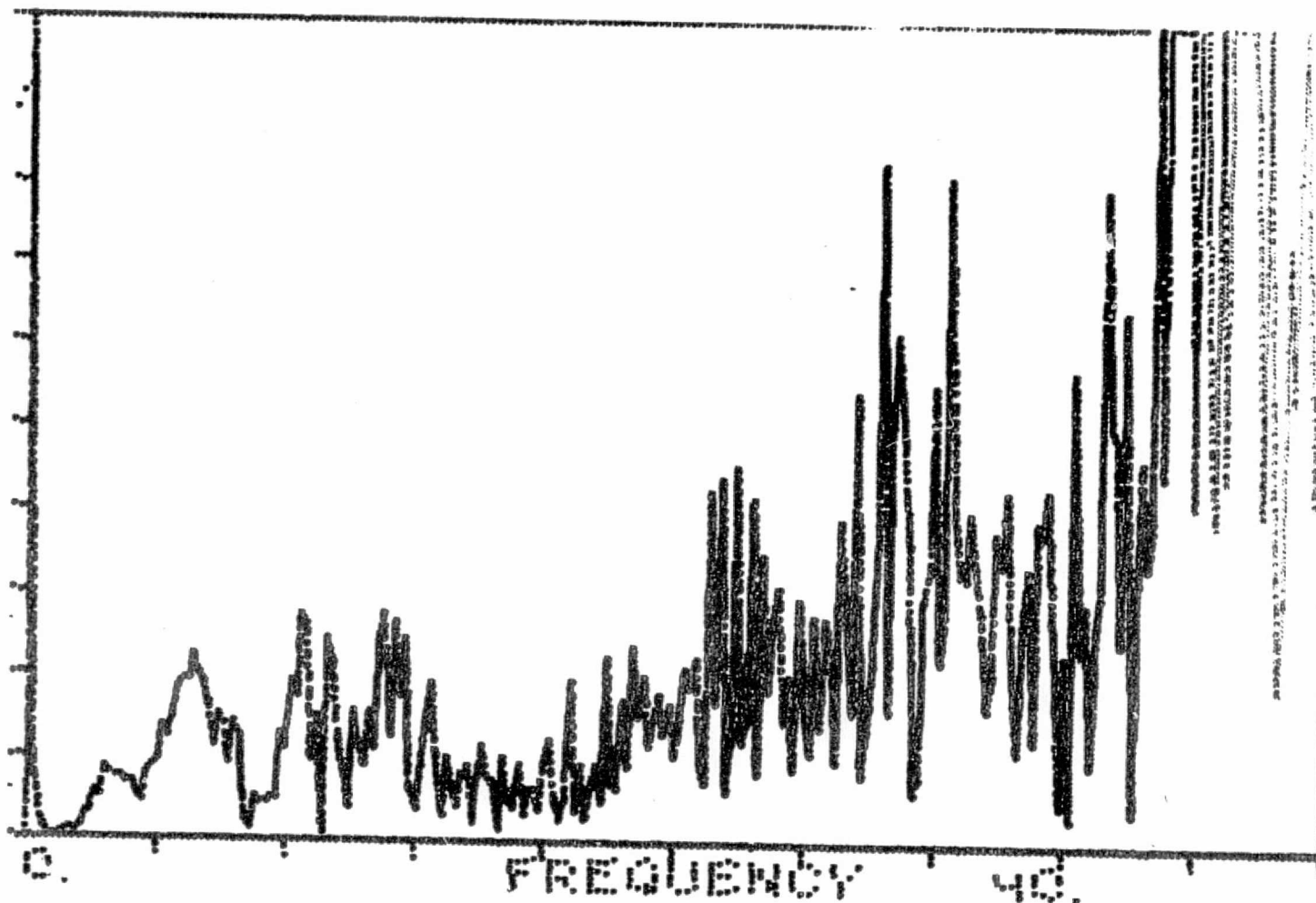
SIZE= 256

AL6/FL1

1.

MAGN

0.



COMPLEX

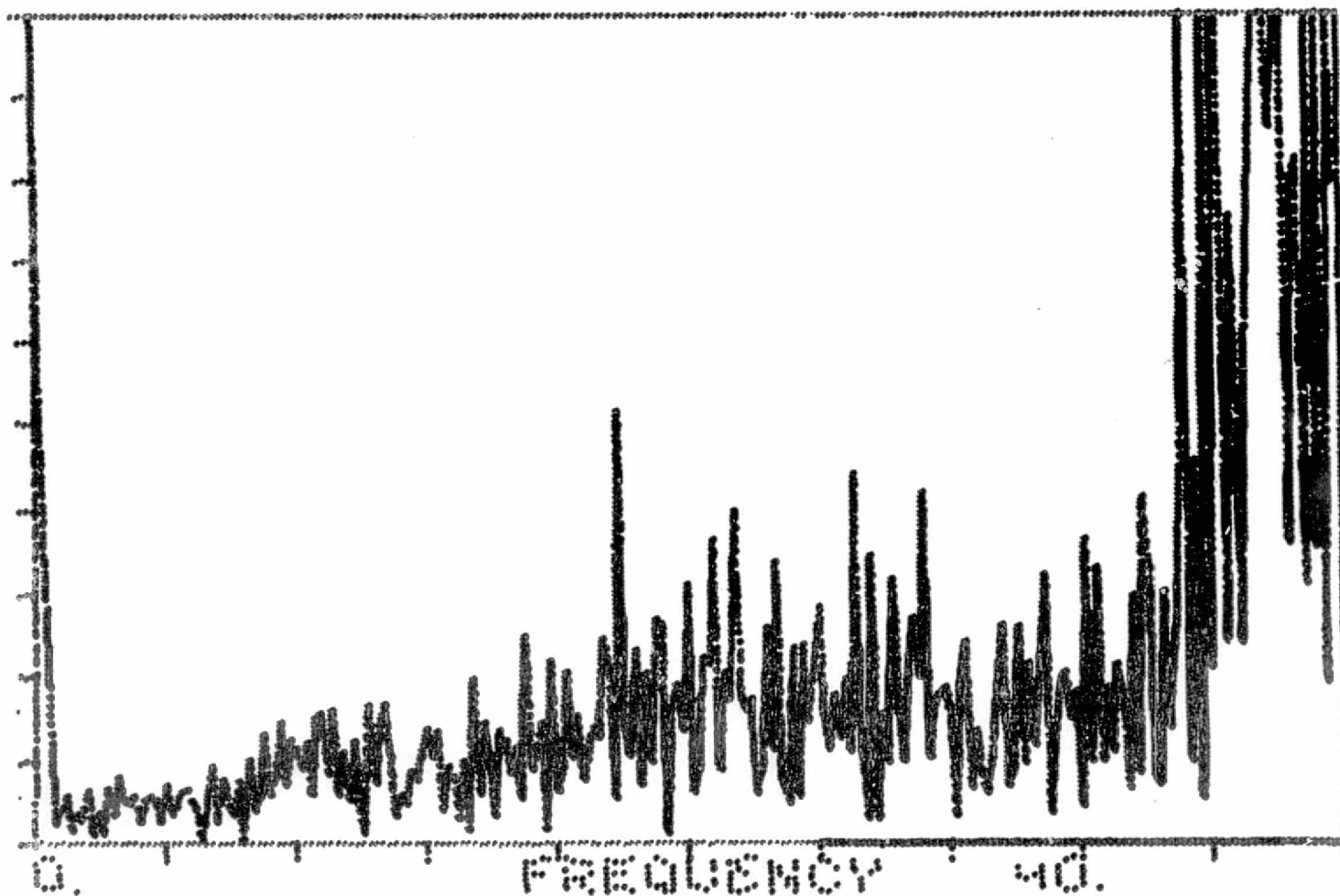
SIZE= 256

AL7/FL1

10.

MAGN

0.



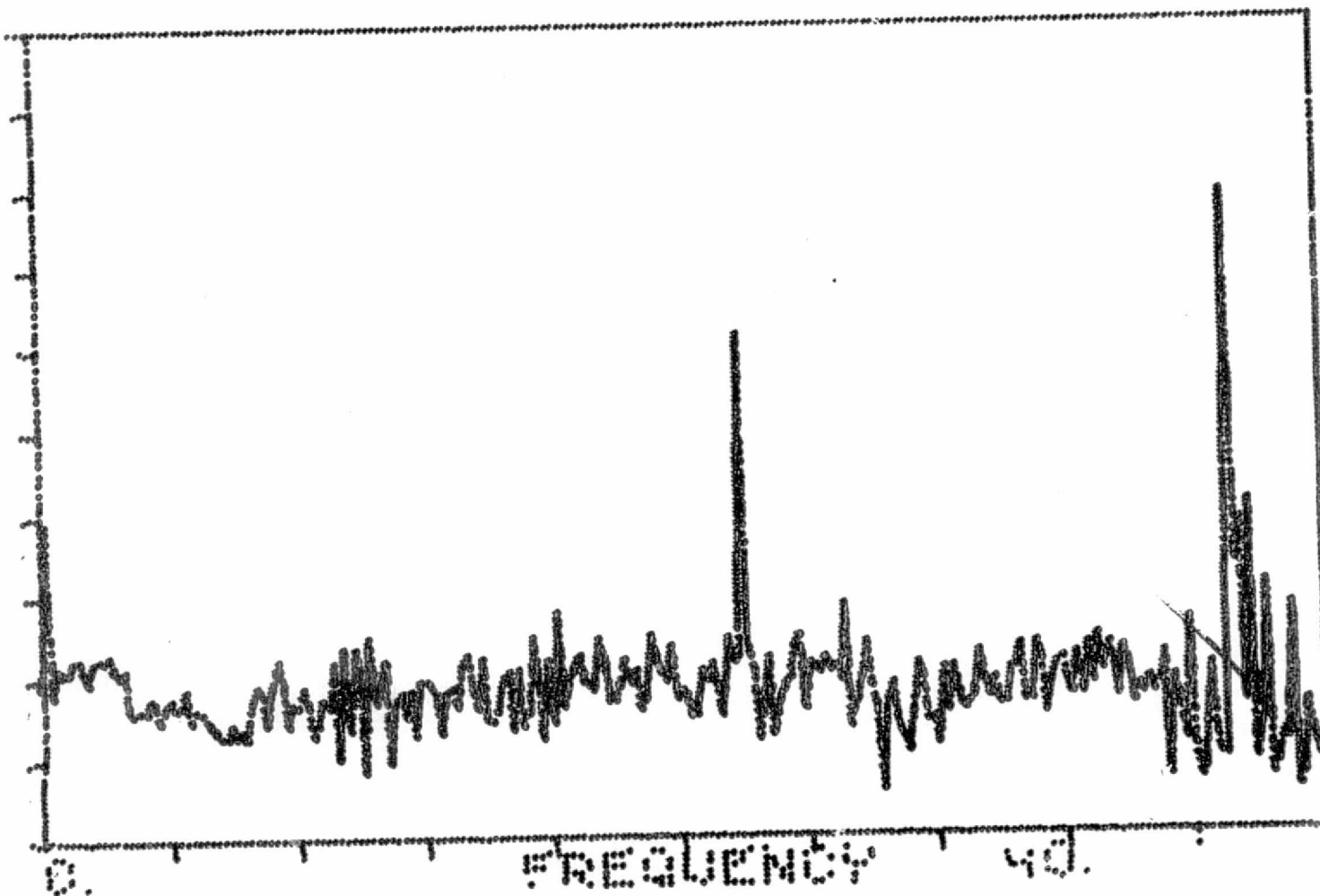
COMPLEX

SIZE= 256

8.

mag

0.



COMPLEX

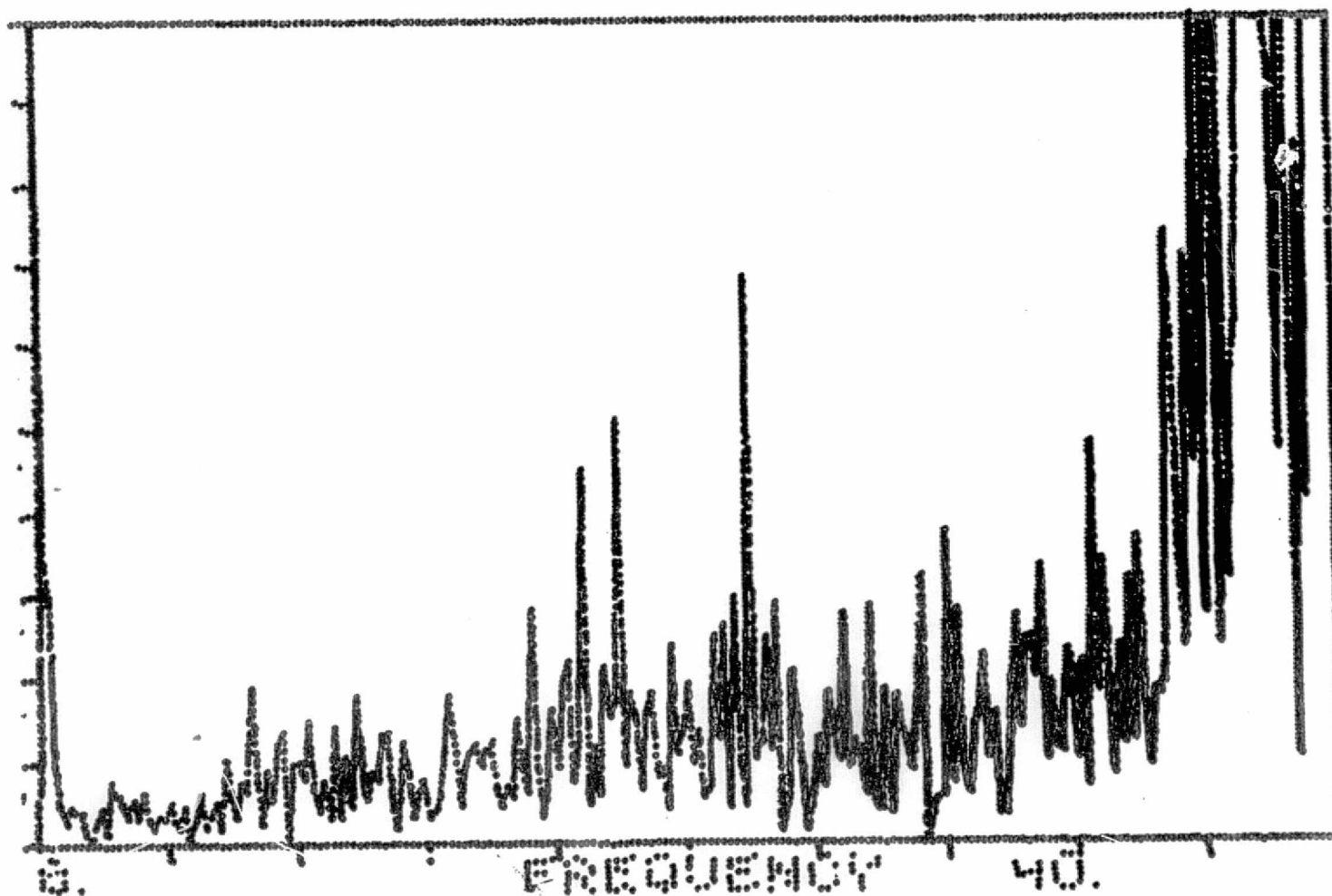
SIZE= 256

$\Delta P/FL1$

10.

HA64

0.



COMPLEX

SIZE 256

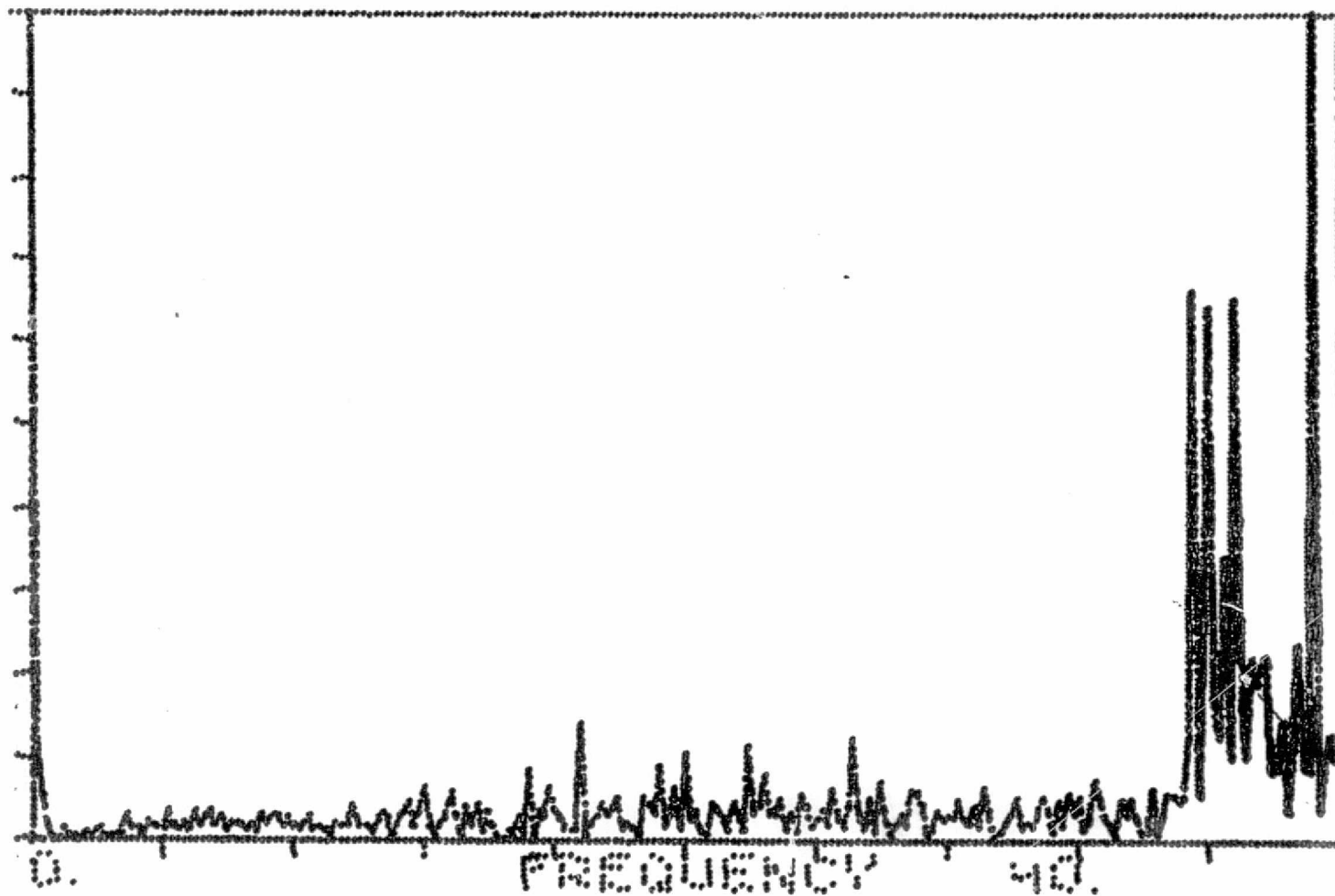
AL4/FL1



50.

17904

0.



COMPLEX

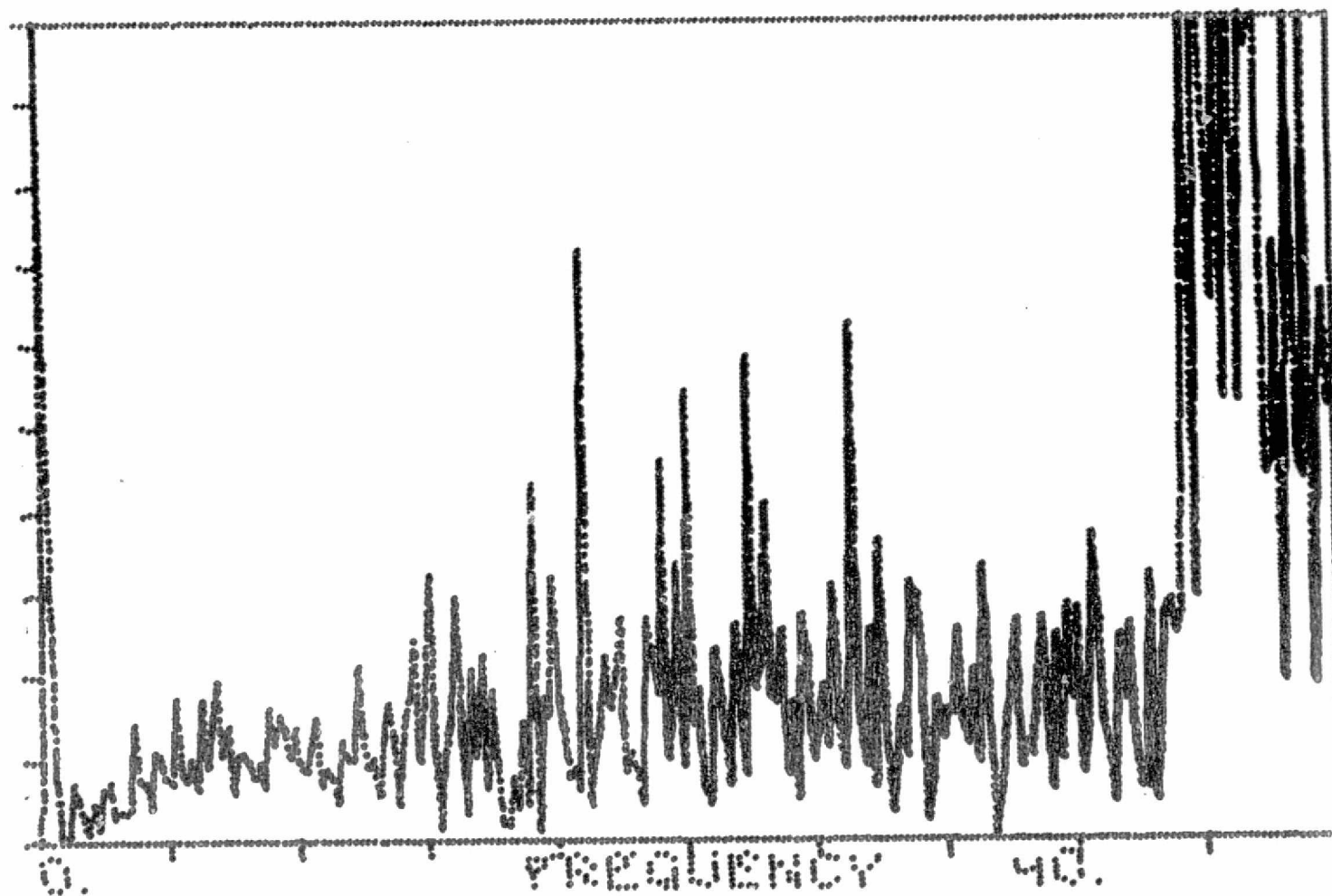
SIZE= 256

AL5/FL1

10.

11464

0.

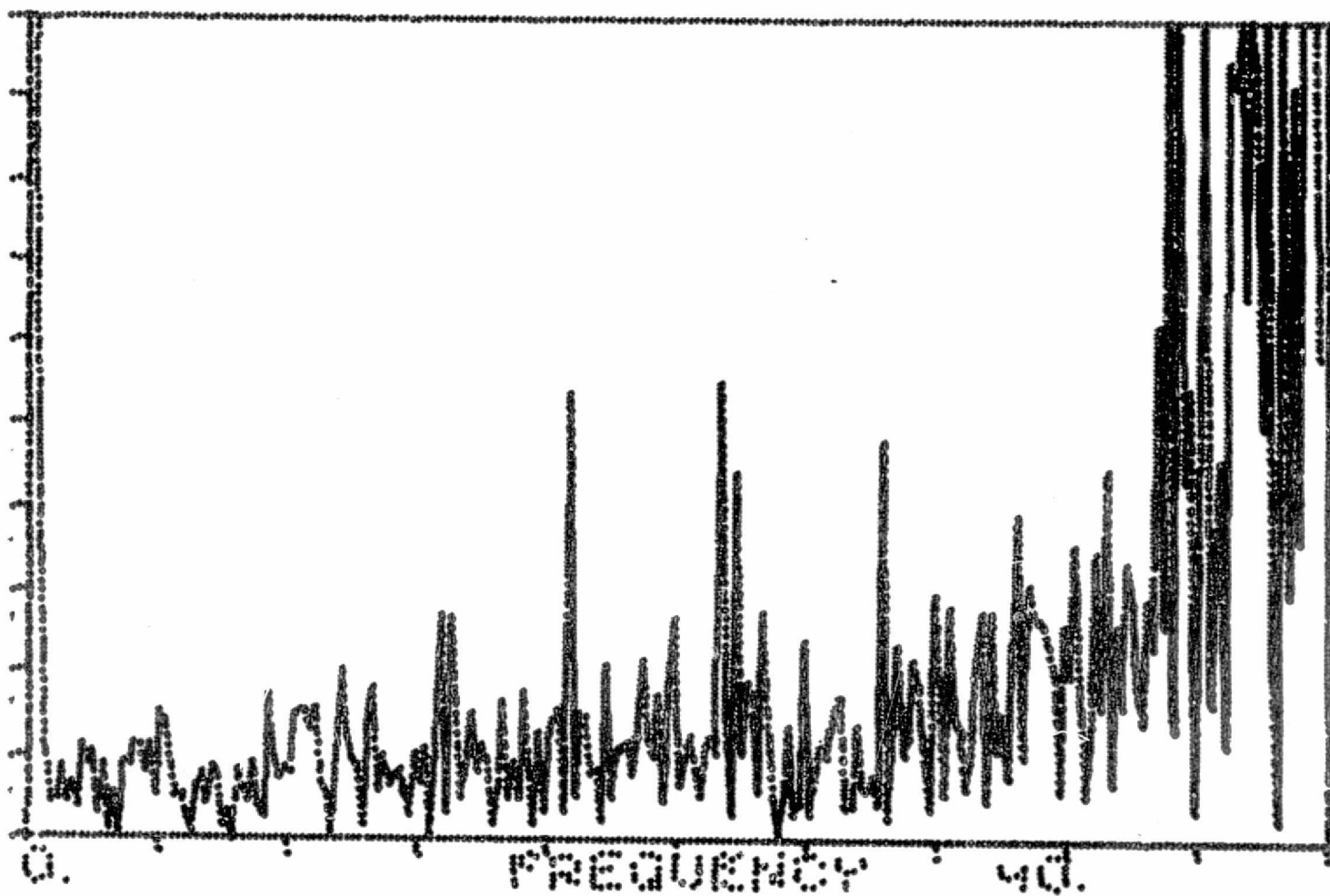


COMPLEX

SIZE= 256

30.

max



COMPLEX

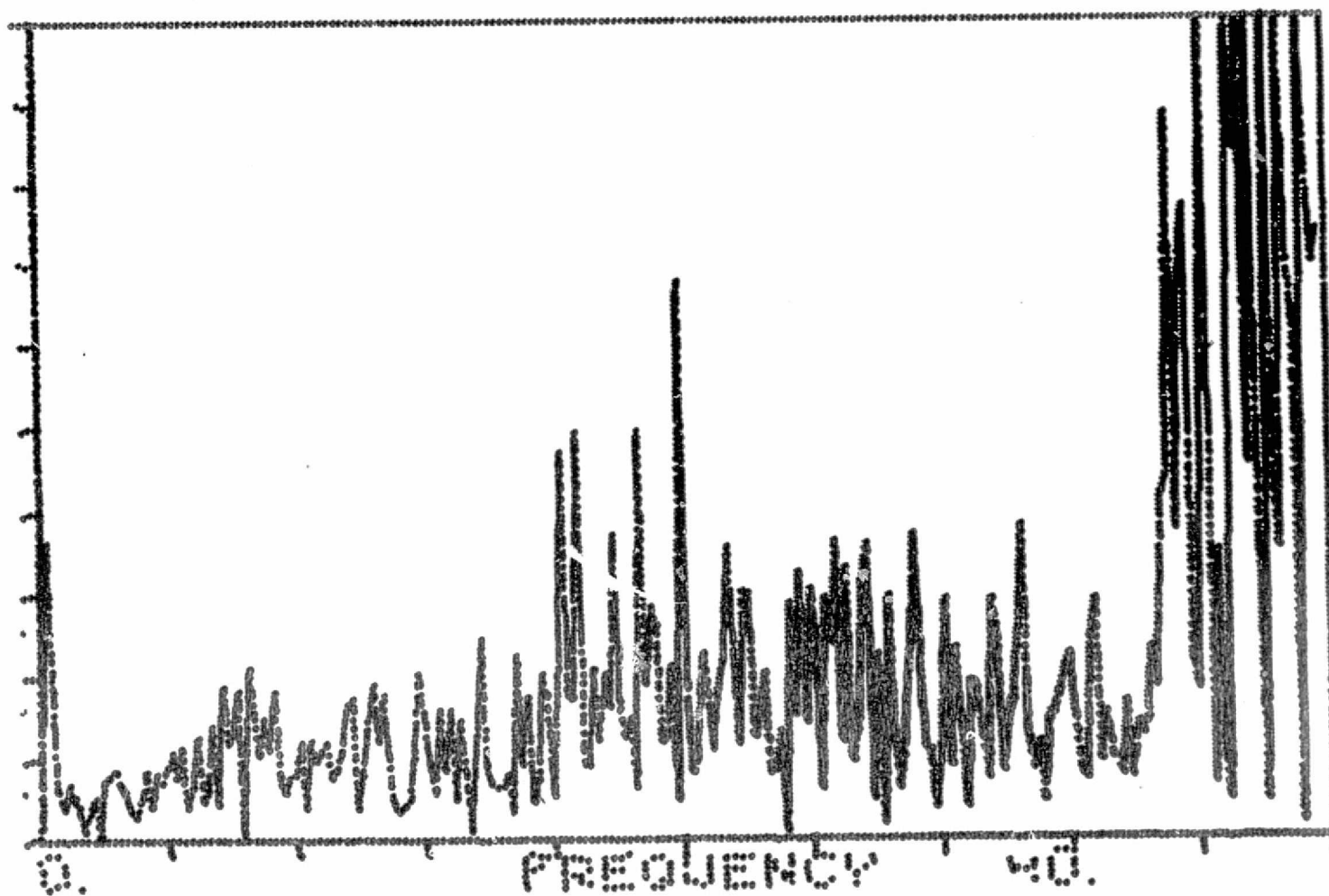
SIZE= 256

AL8/FL1

10.

MAGN

0.



COMPLEX

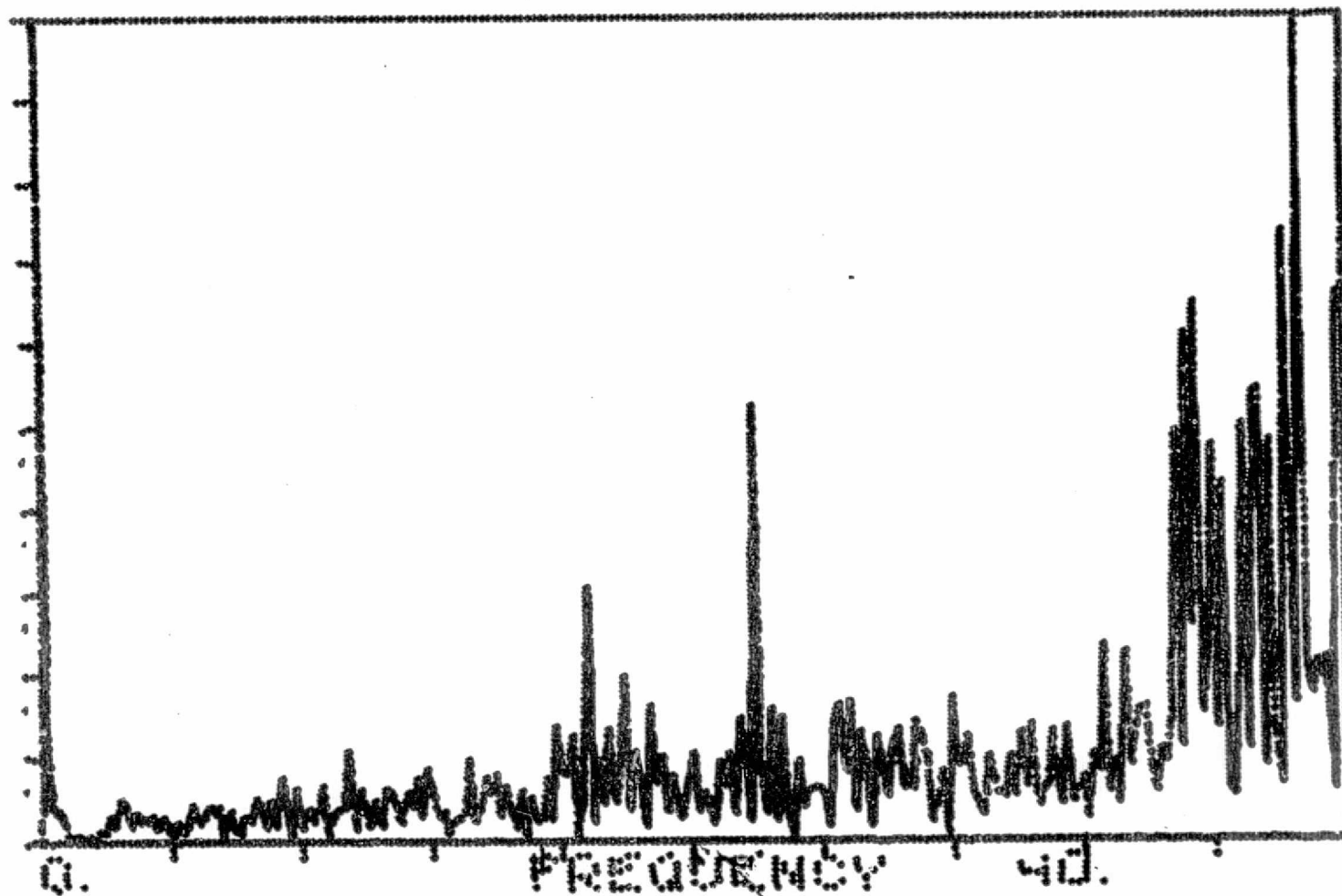
SIZE= 256

AL9/FL1

20.

HPBW

0.



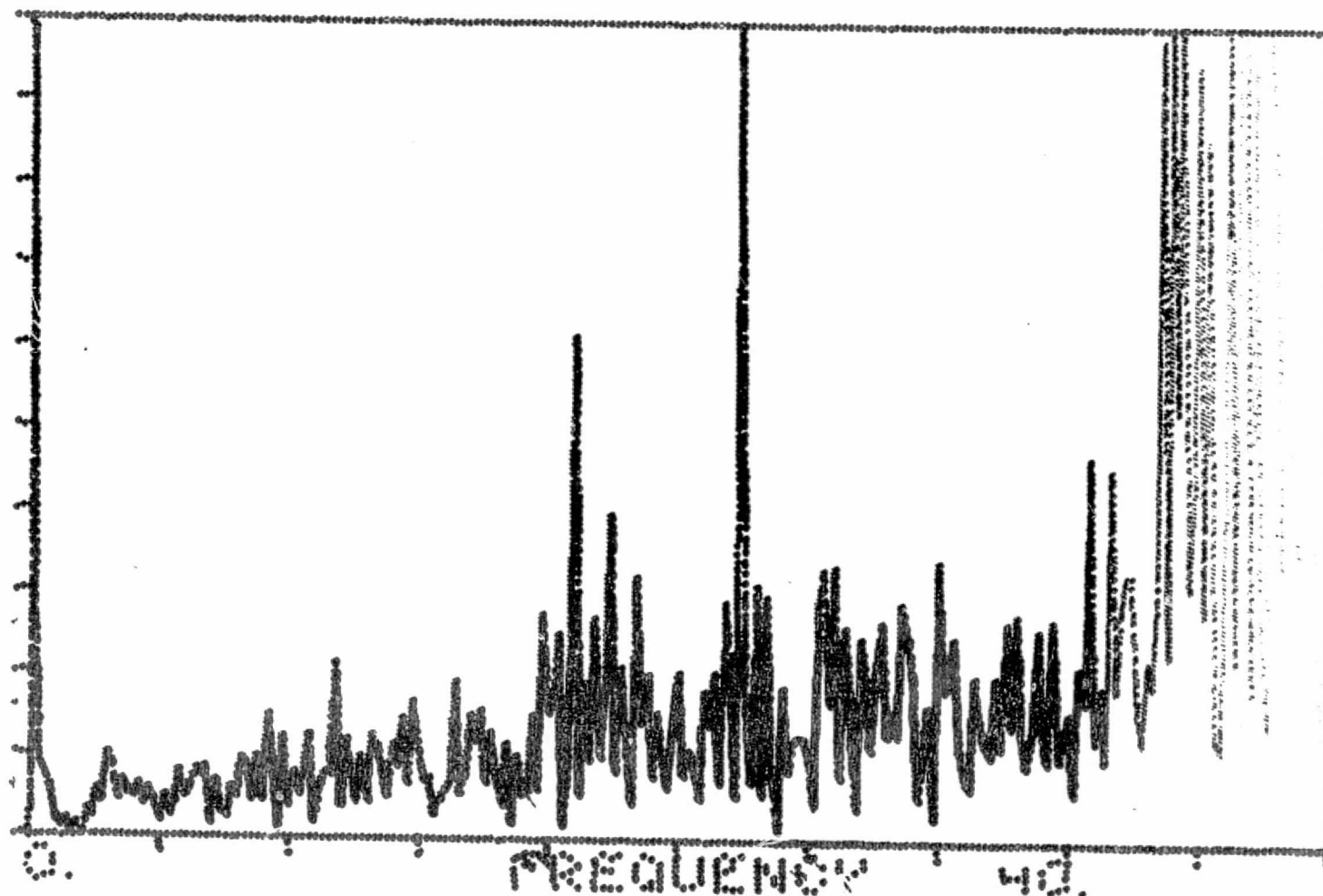
COMPLEX

SIZE= 256

10.

1100H

0.



COMPLEX

SIZE= 256

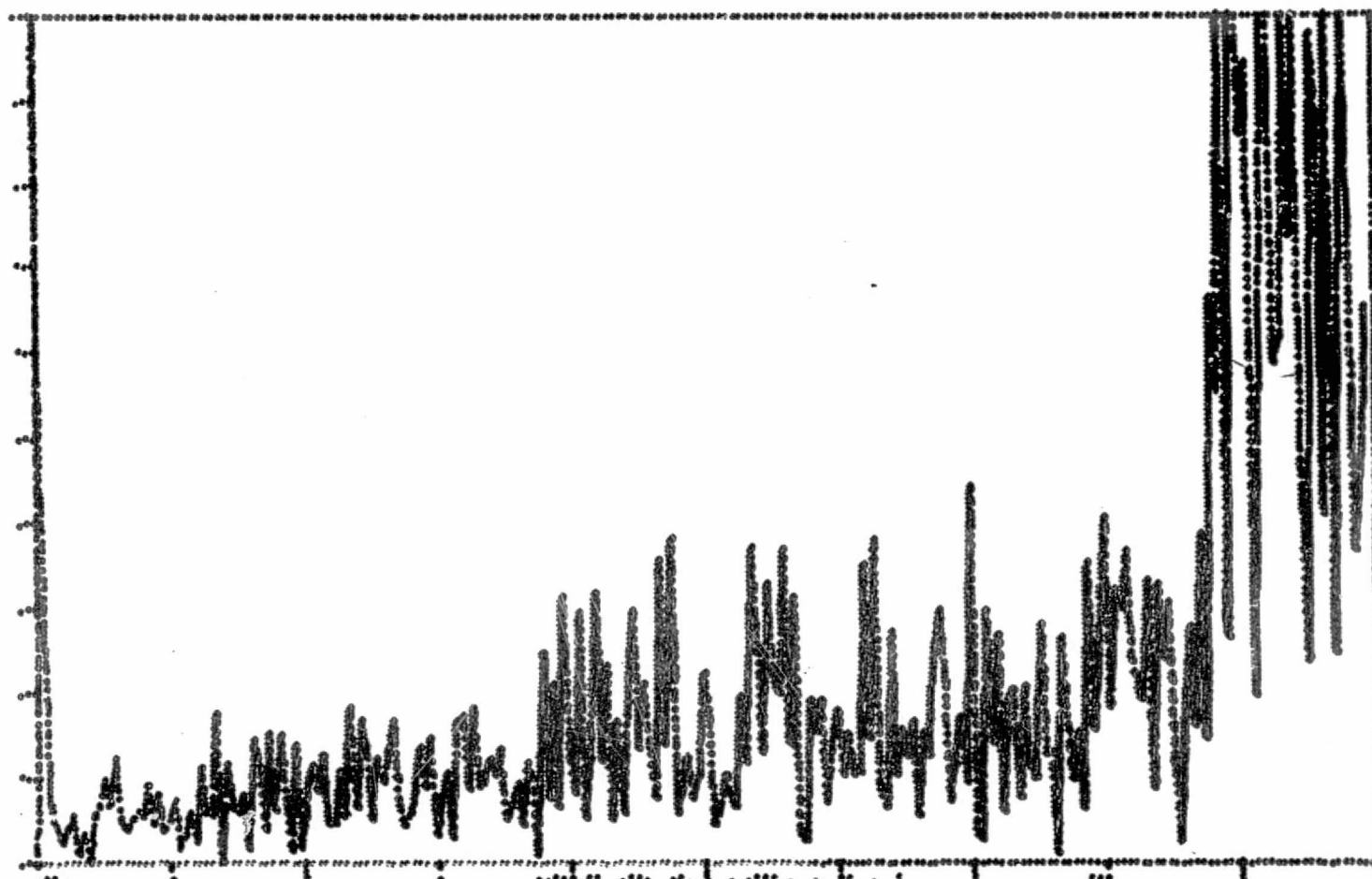
AL10/FL1



10.

11904

0.



0.

FREQUENCY

40.

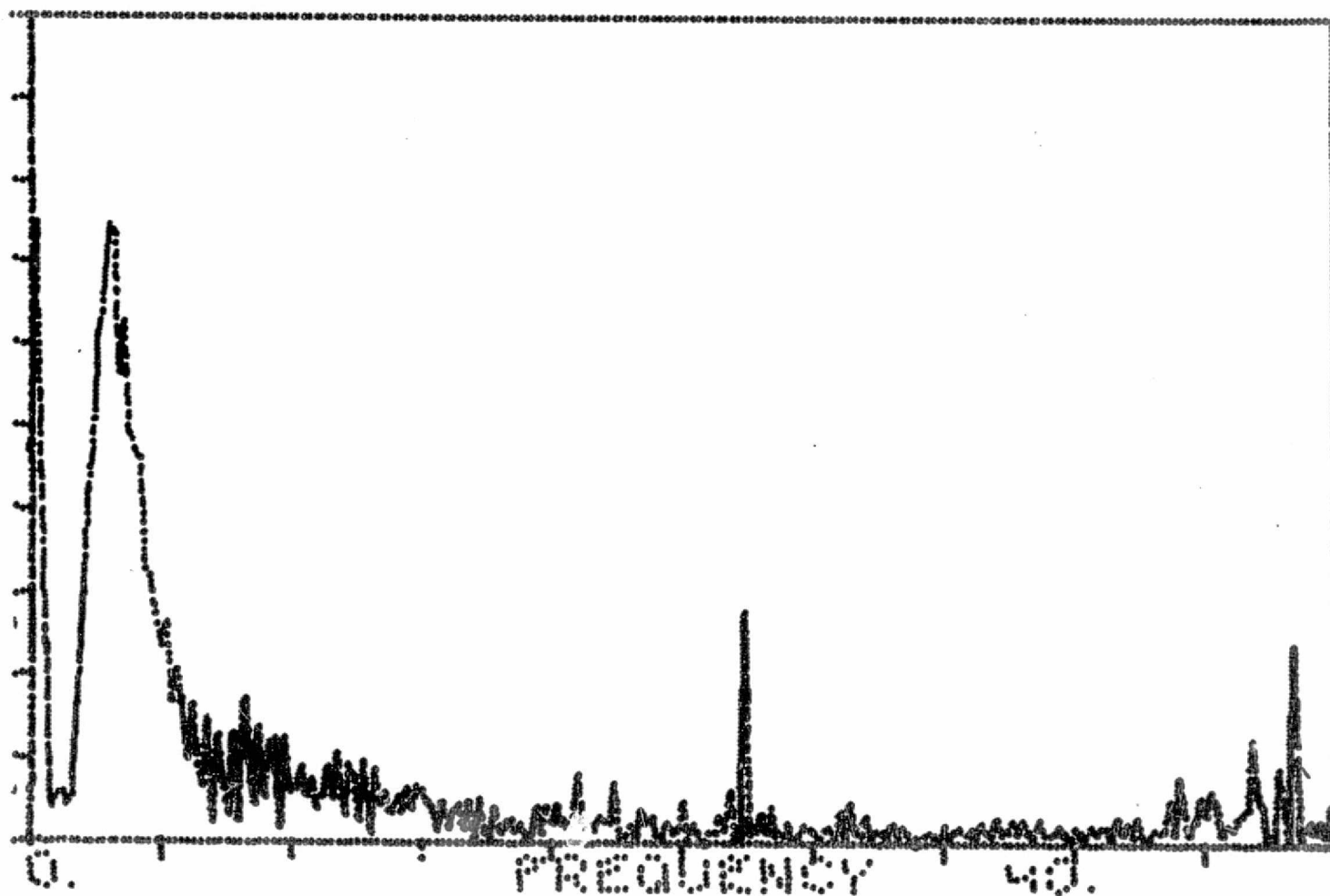
COMPLEX

SIZE= 350

2.

MAON

2.



COMPLEX

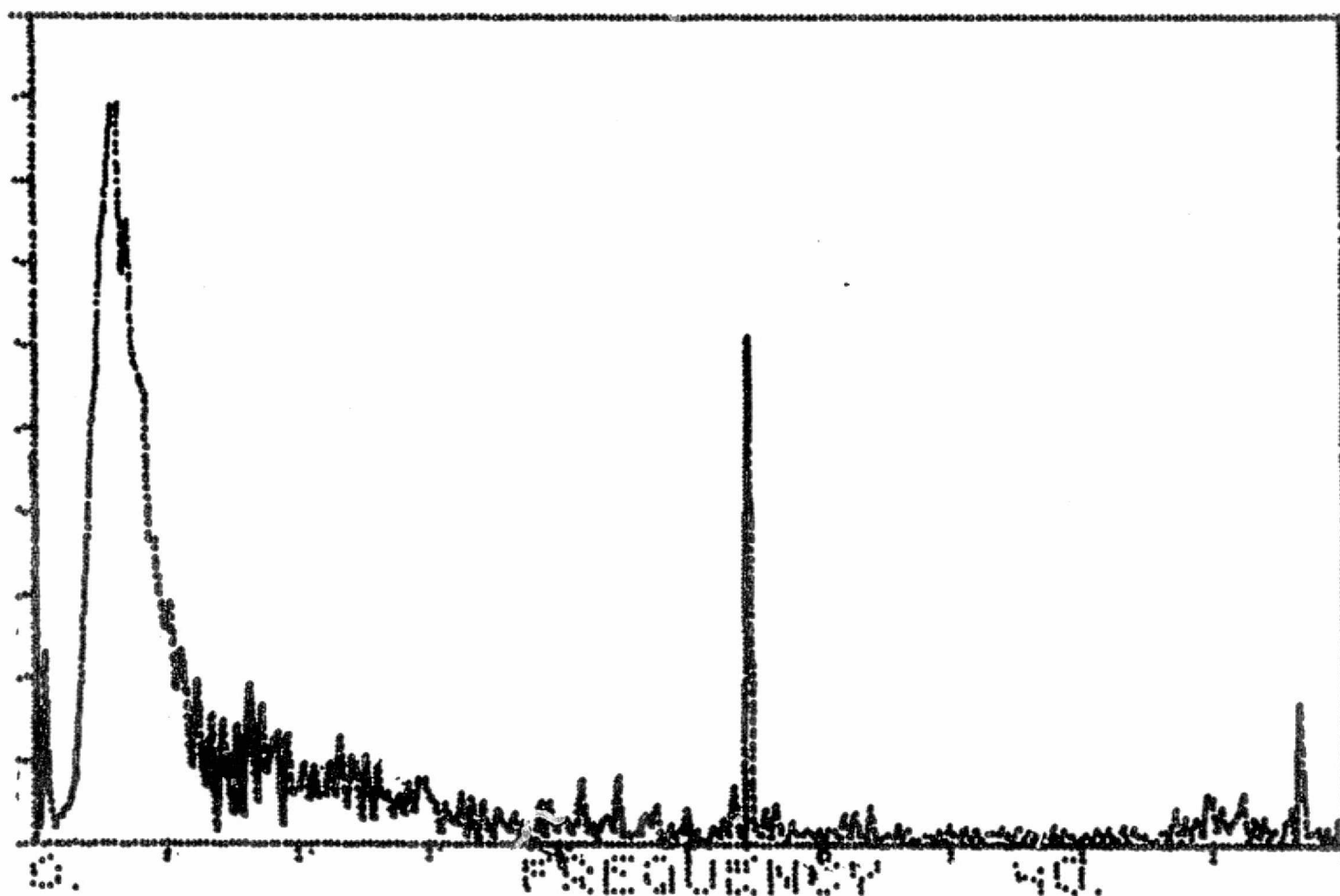
SIZE= 256

DL1/FL1

2.

1964

0.



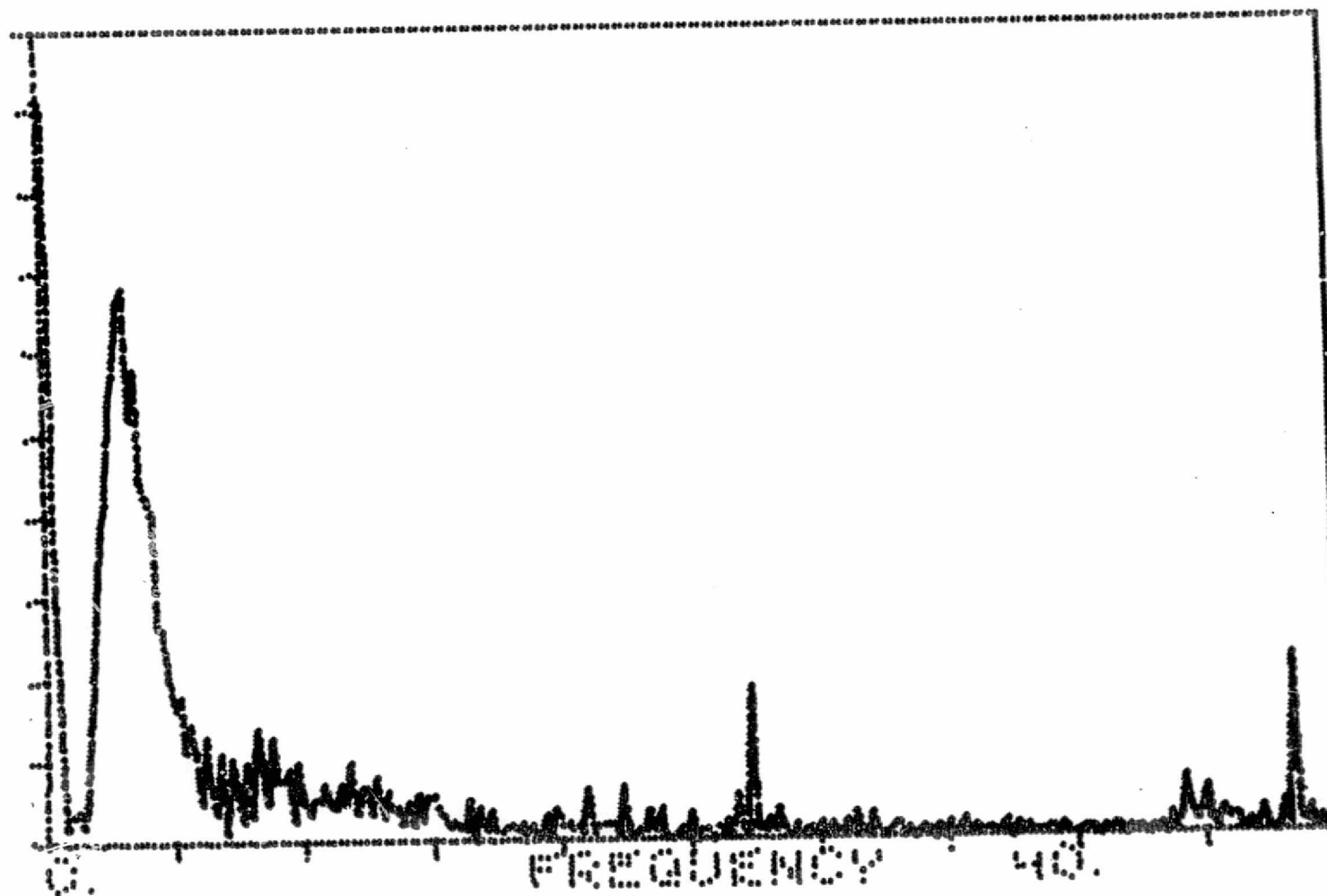
COMPLEX

SIZE= 250

1.

11404

0.



COMPLEX

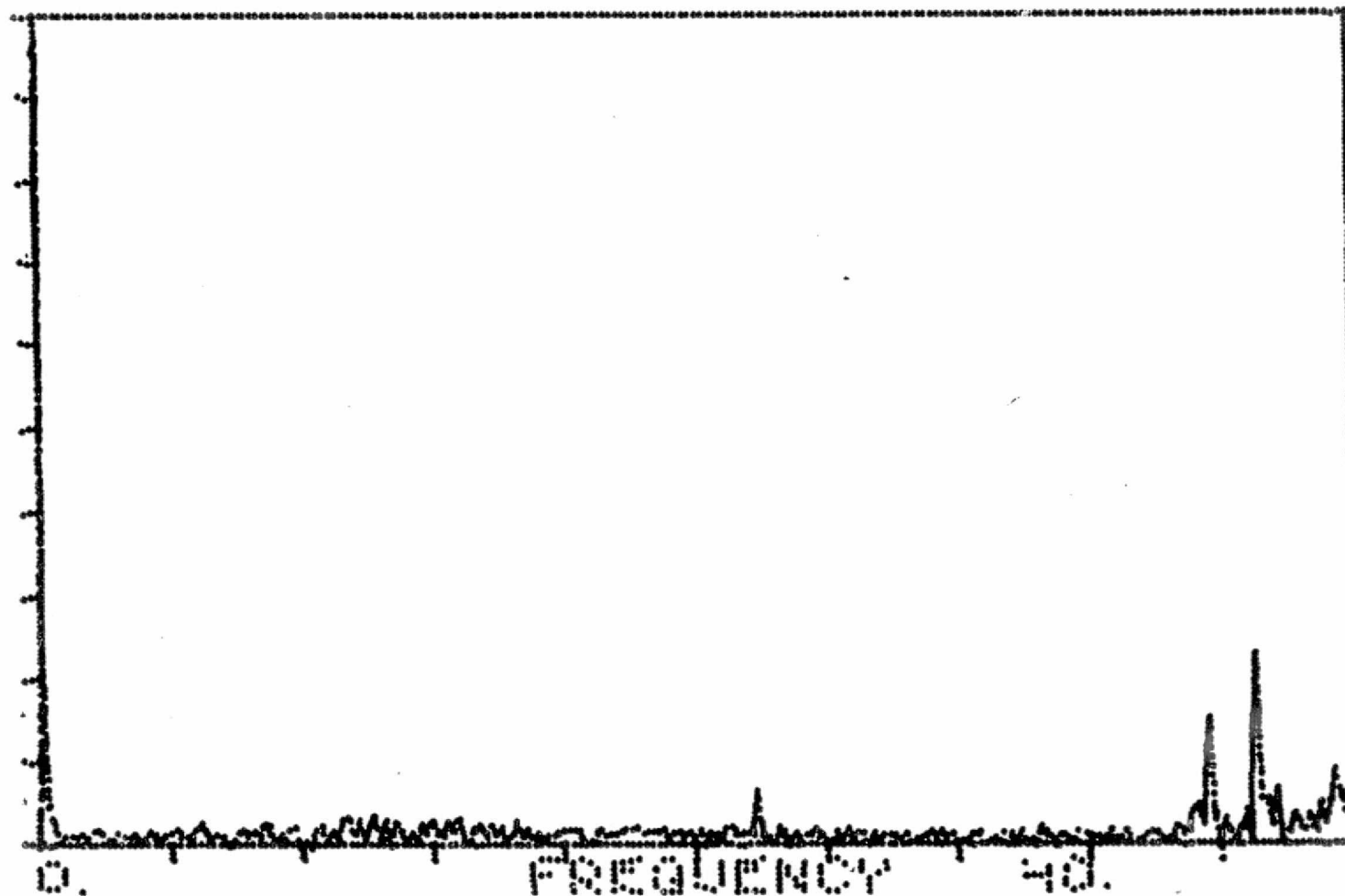
SIZE 255

DL3/FL1

1.

MAON

11.



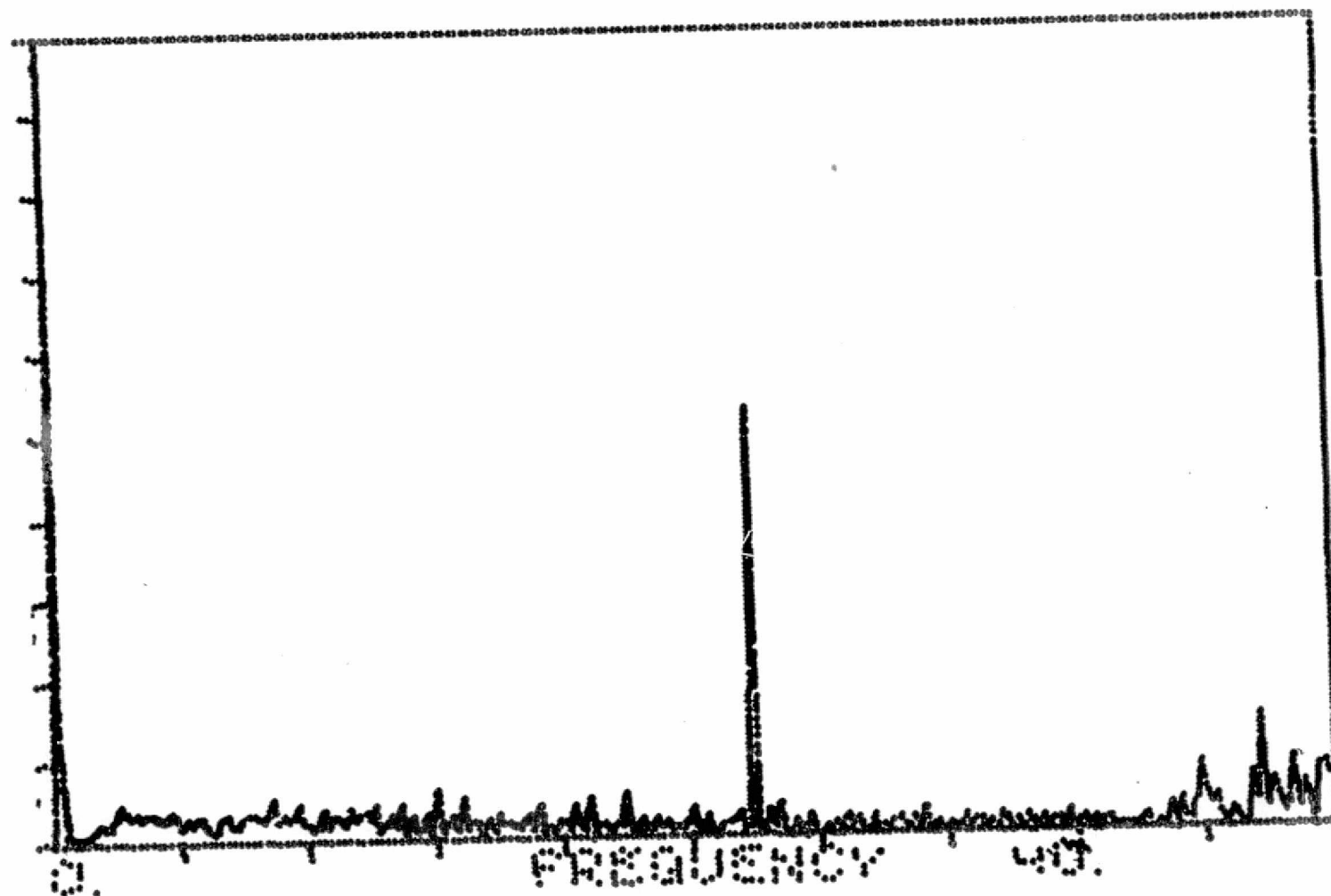
COMPLEX

SIZE= 256

1.

MAGN

0.



255

COMPLEX

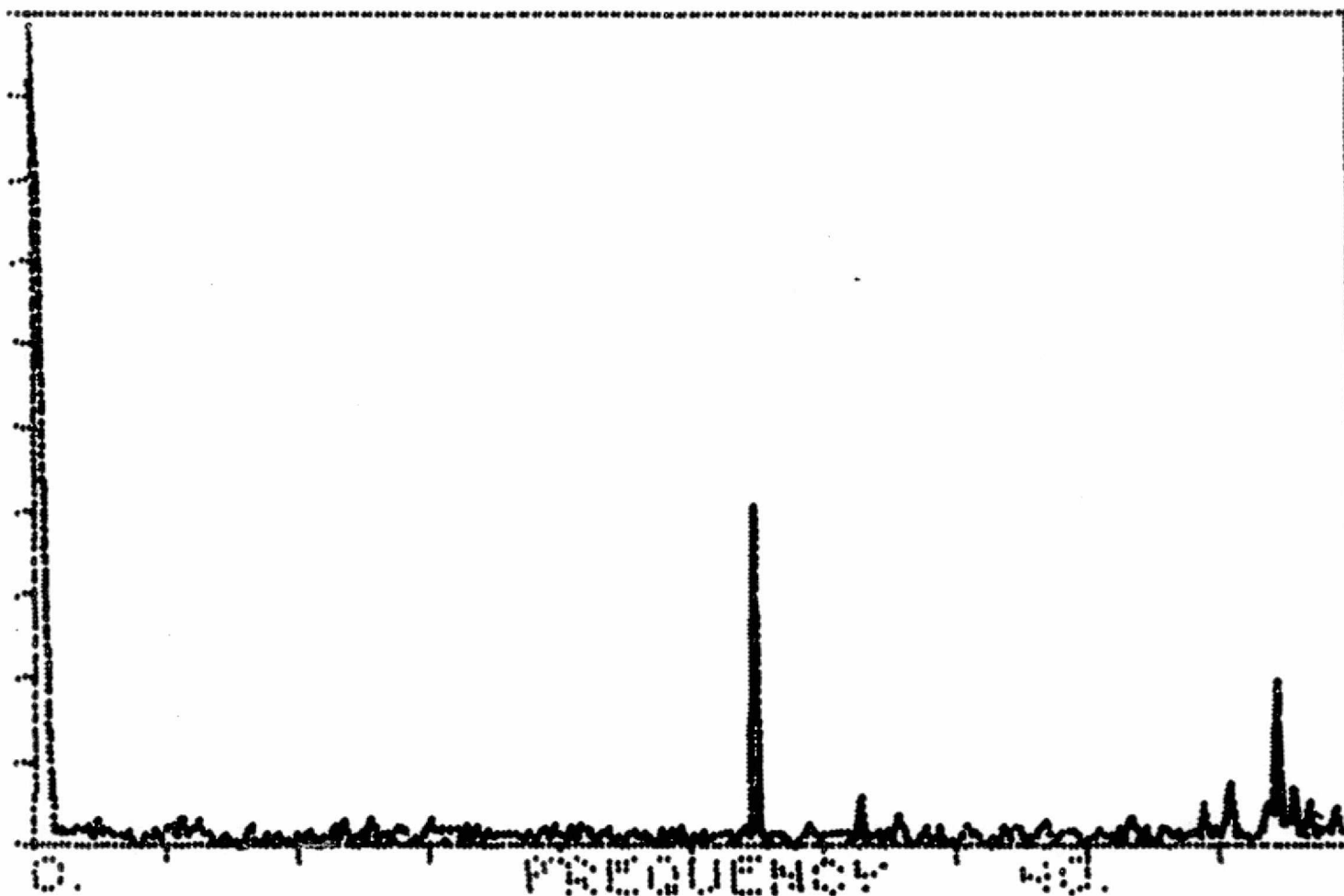
8125 255



1.

11404

1.



COMPLEX

SIZE= 256

BL6/FL1

3.

112014

0.



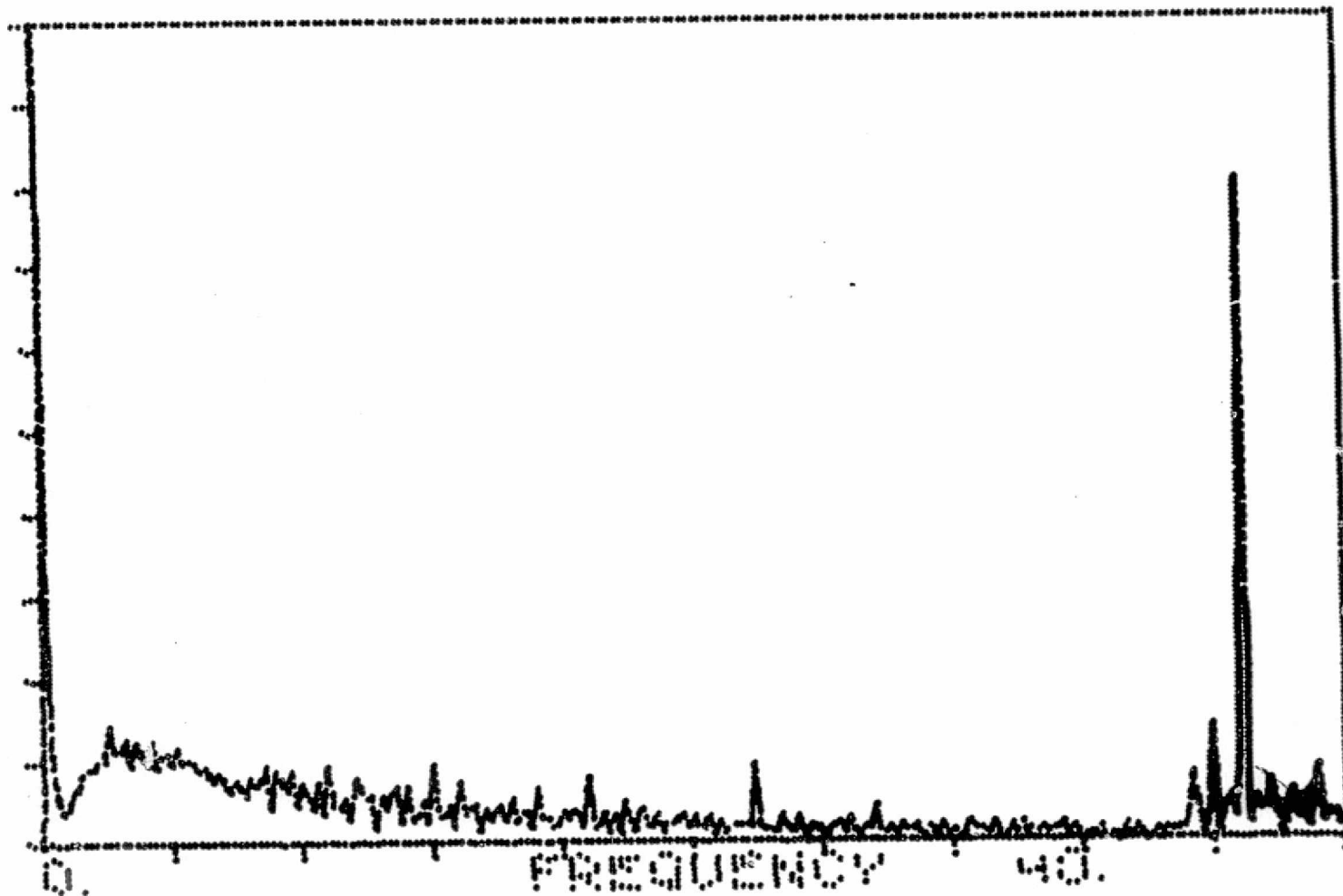
COMPLEX

SIZE= 256

3.

1190M

0.



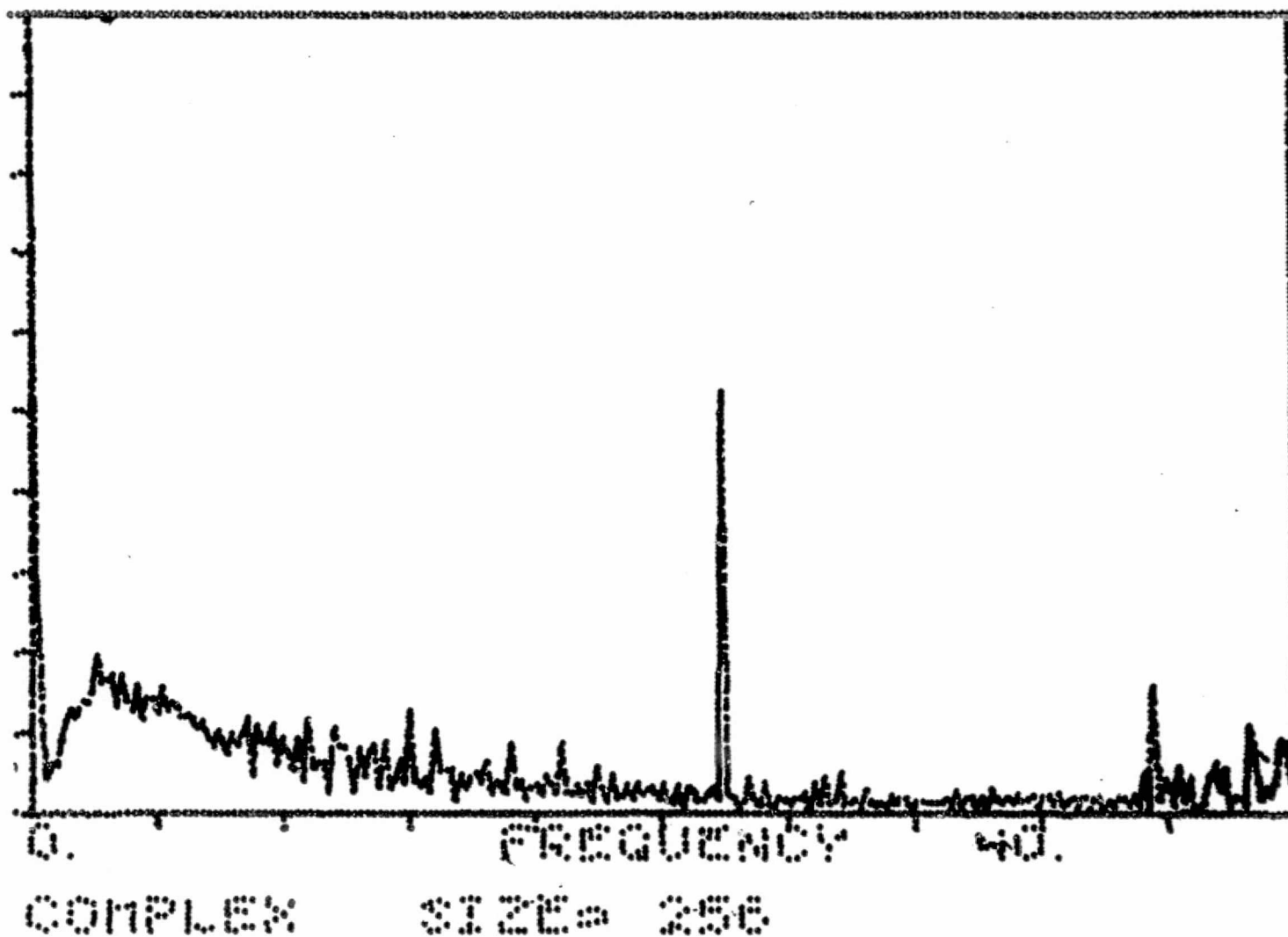
COMPLEX

SIZE= 256

1.

HAON

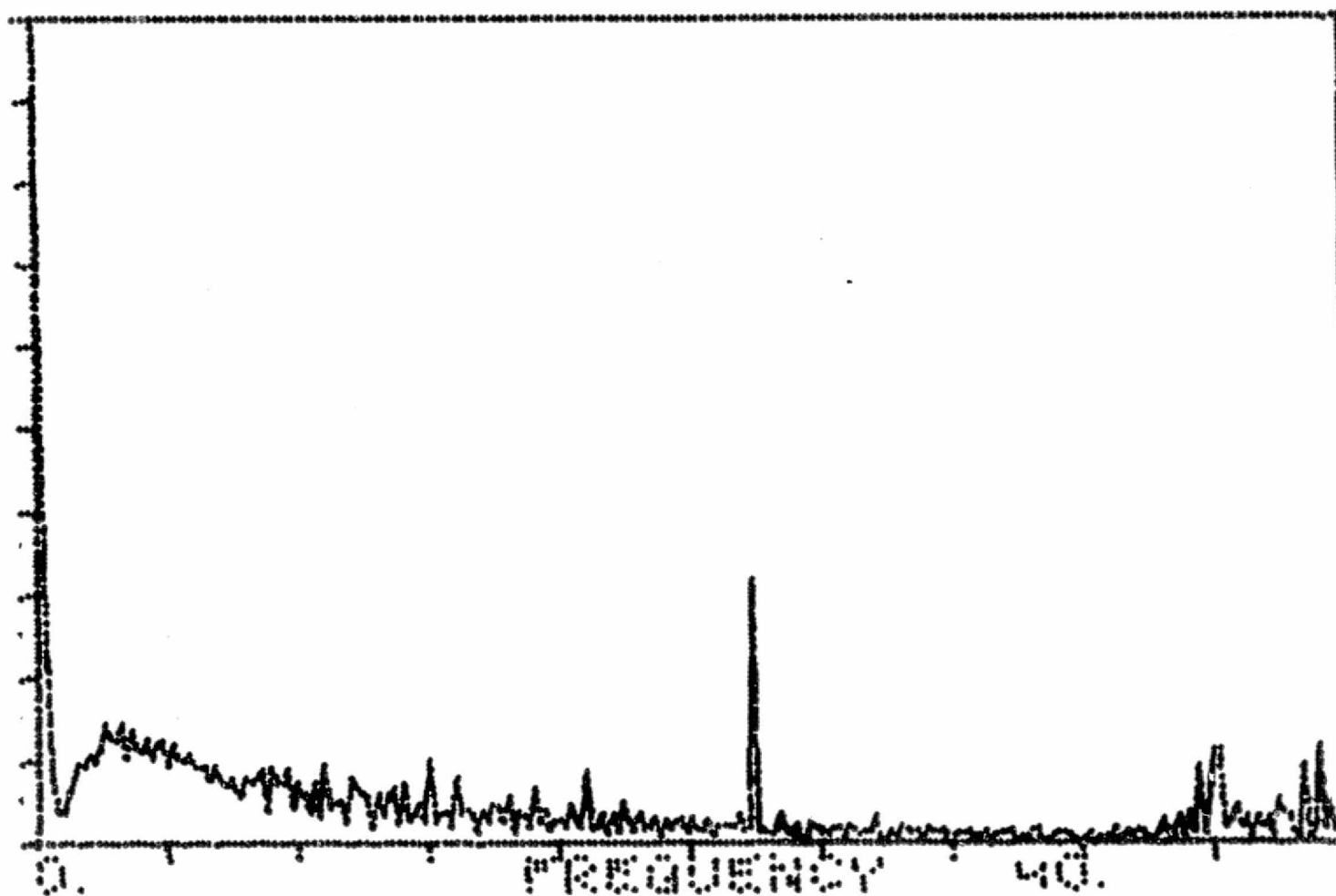
0.



1.

1967

10.



COMPLEX

SIZE\* 250

DL10/FL1

3.

1964

0.



COMPLEX

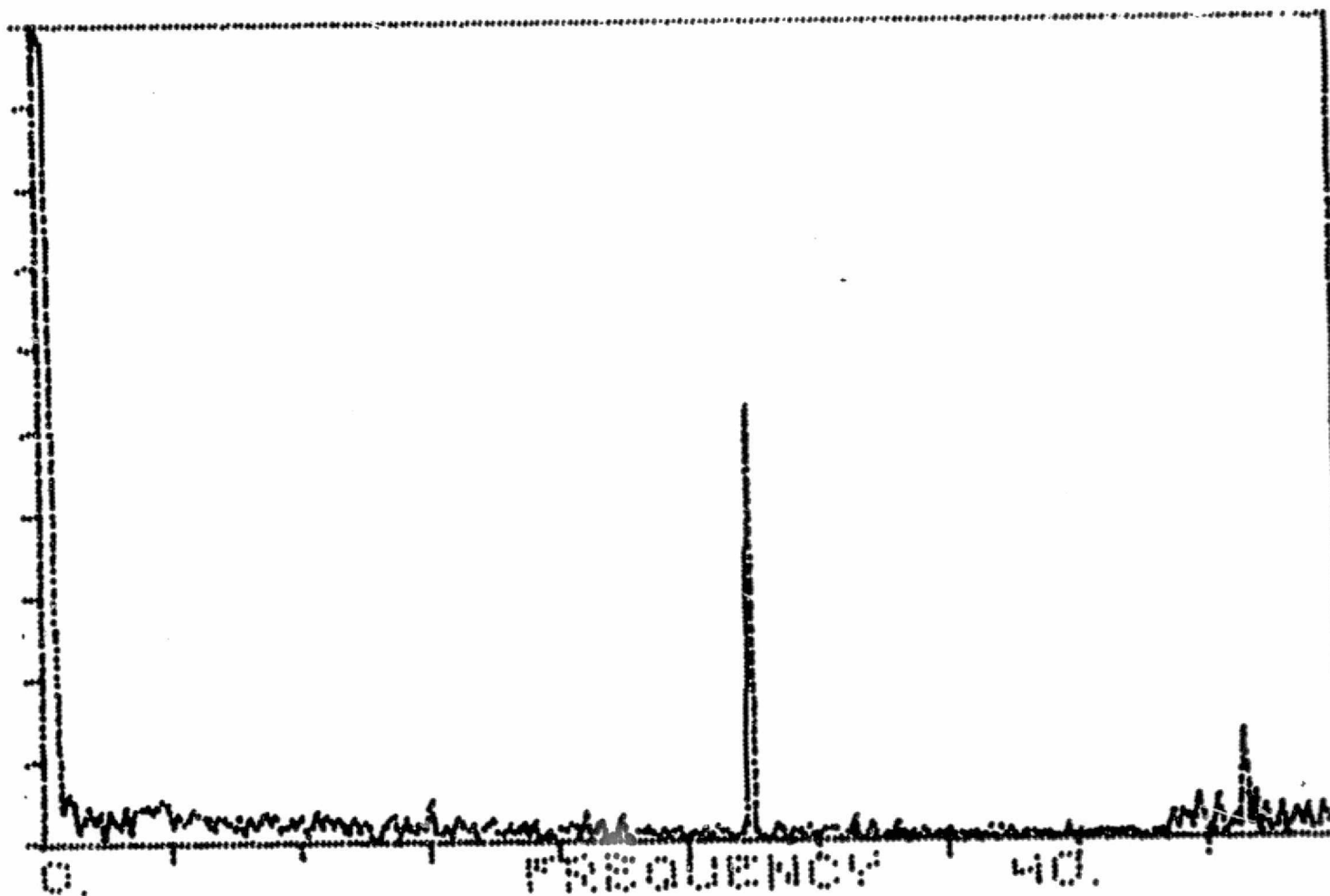
SIZE= 250



1.

1904

0.



COMPLEX

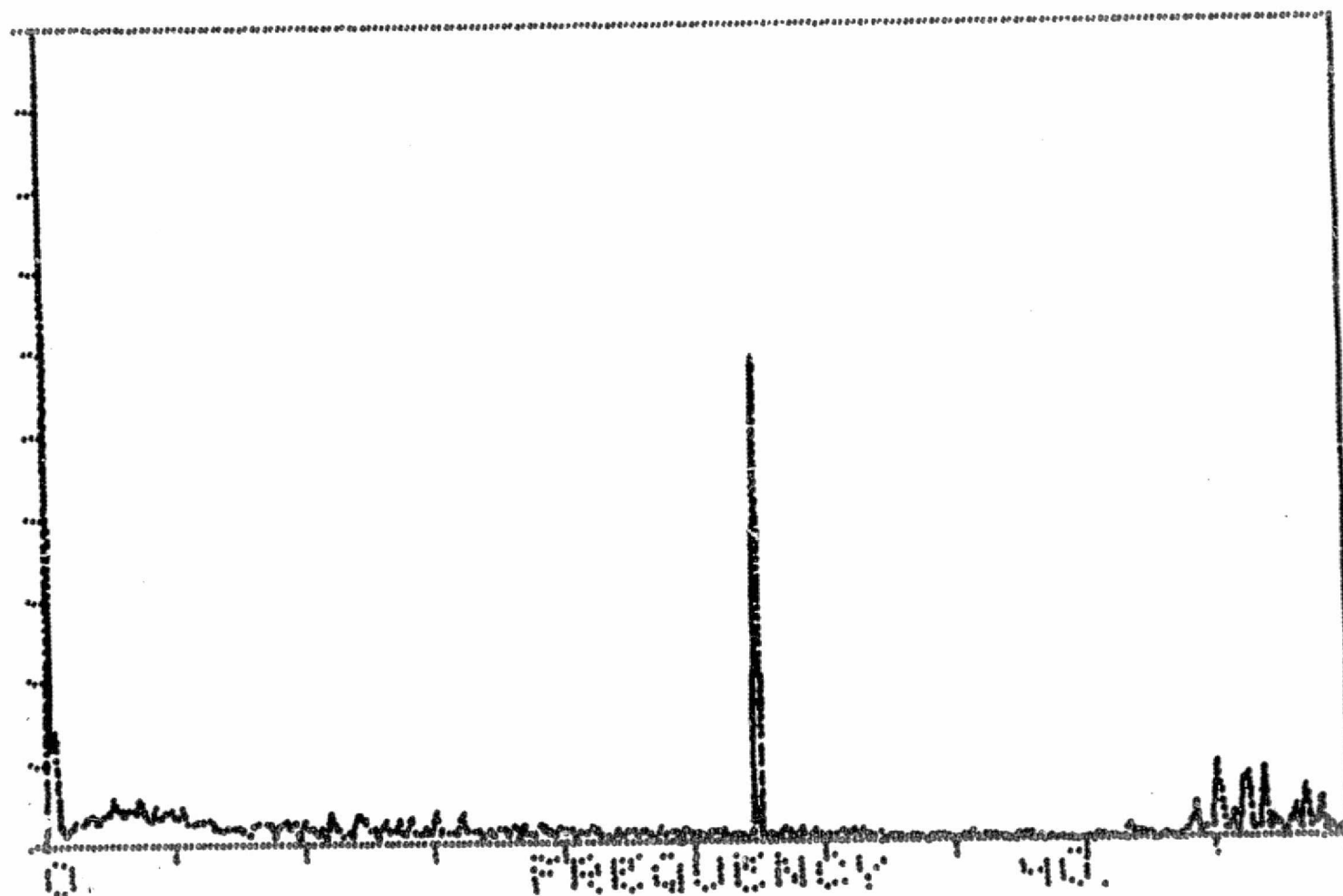
SIZE\* 256

DL12/FL1

1.

HAON

0.



COMPLEX

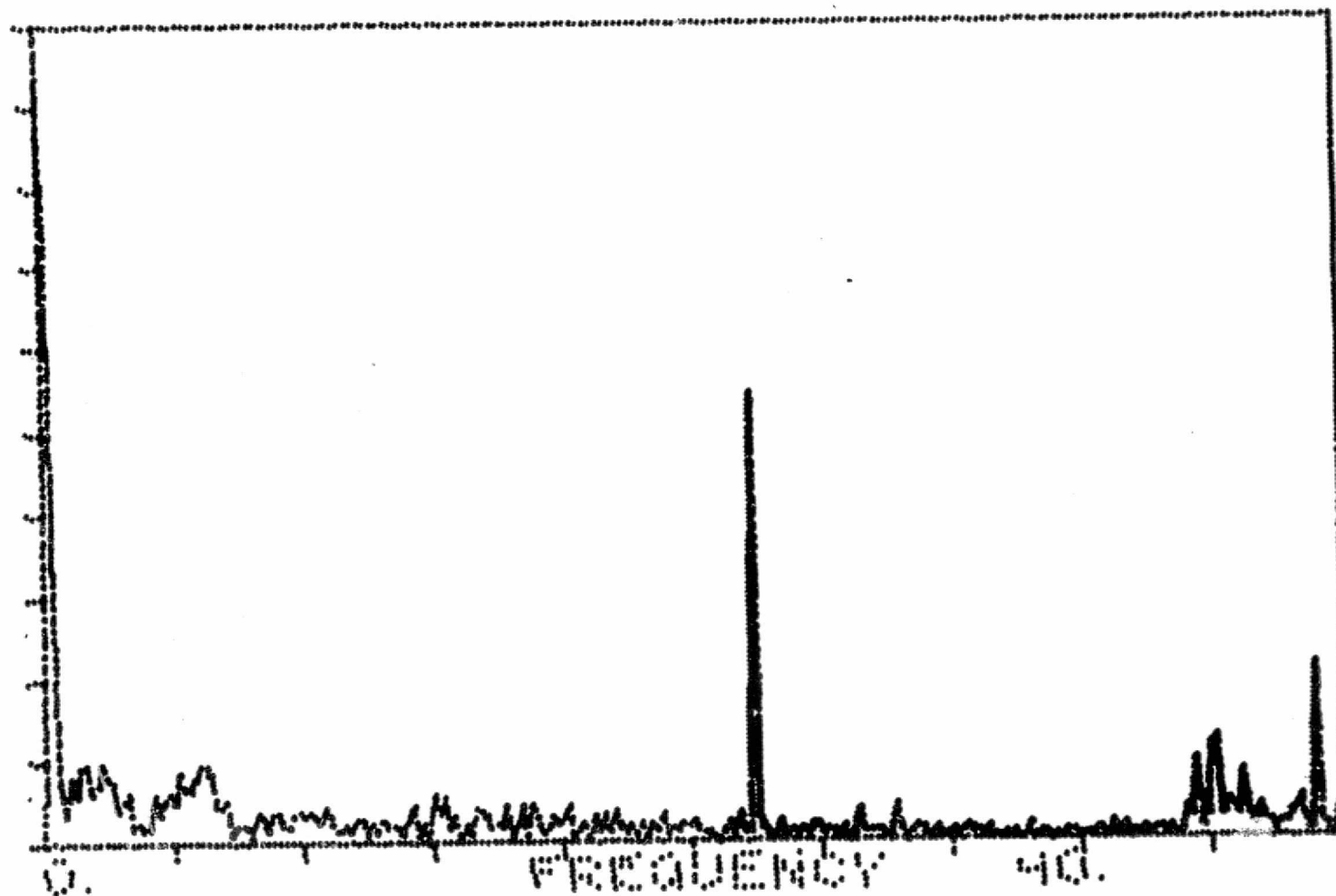
SIZE\* 256

DL13/FL1

1.

MAGN

0.



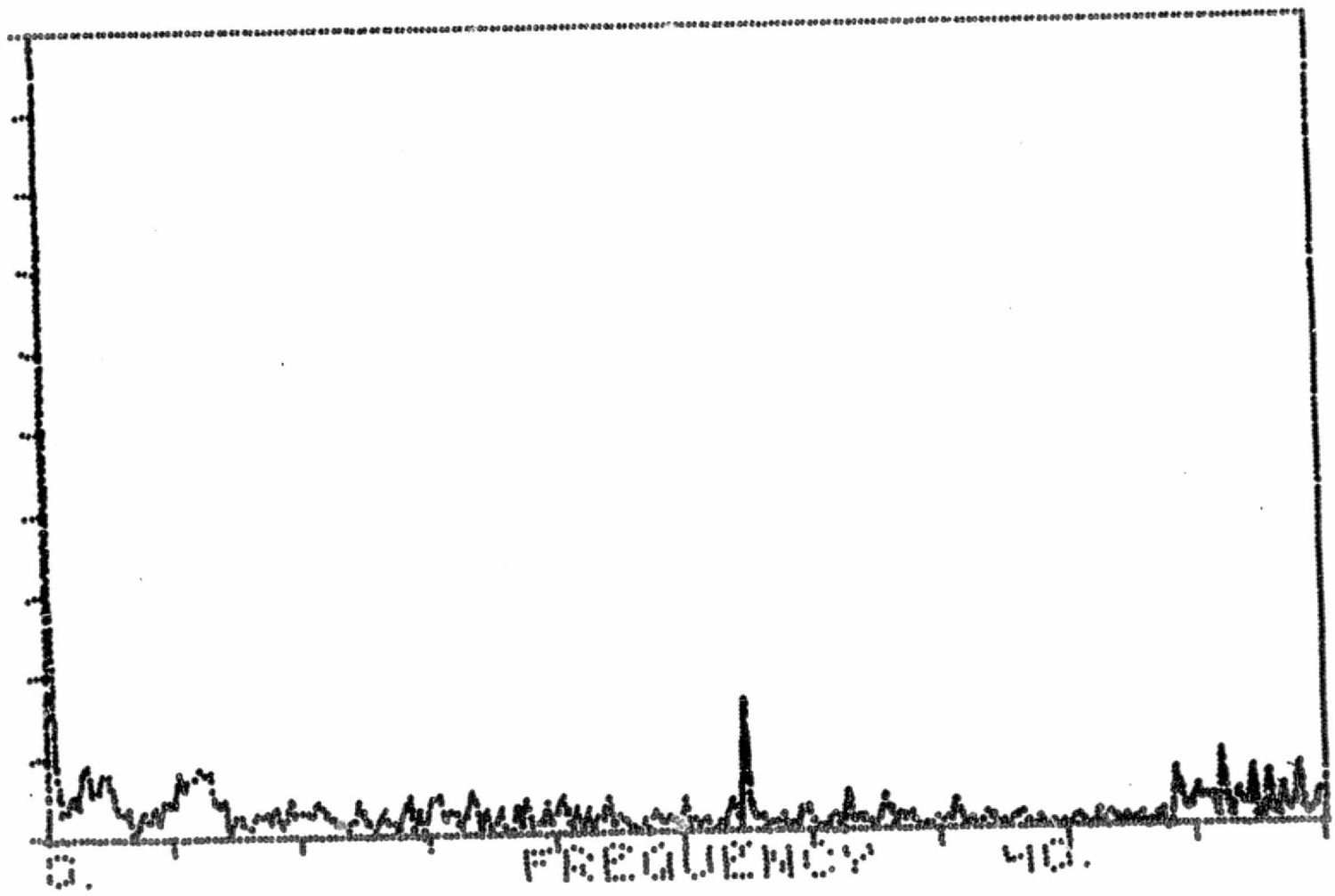
COMPLEX

SIZE= 256

1.

1964

2.



COMPLEX

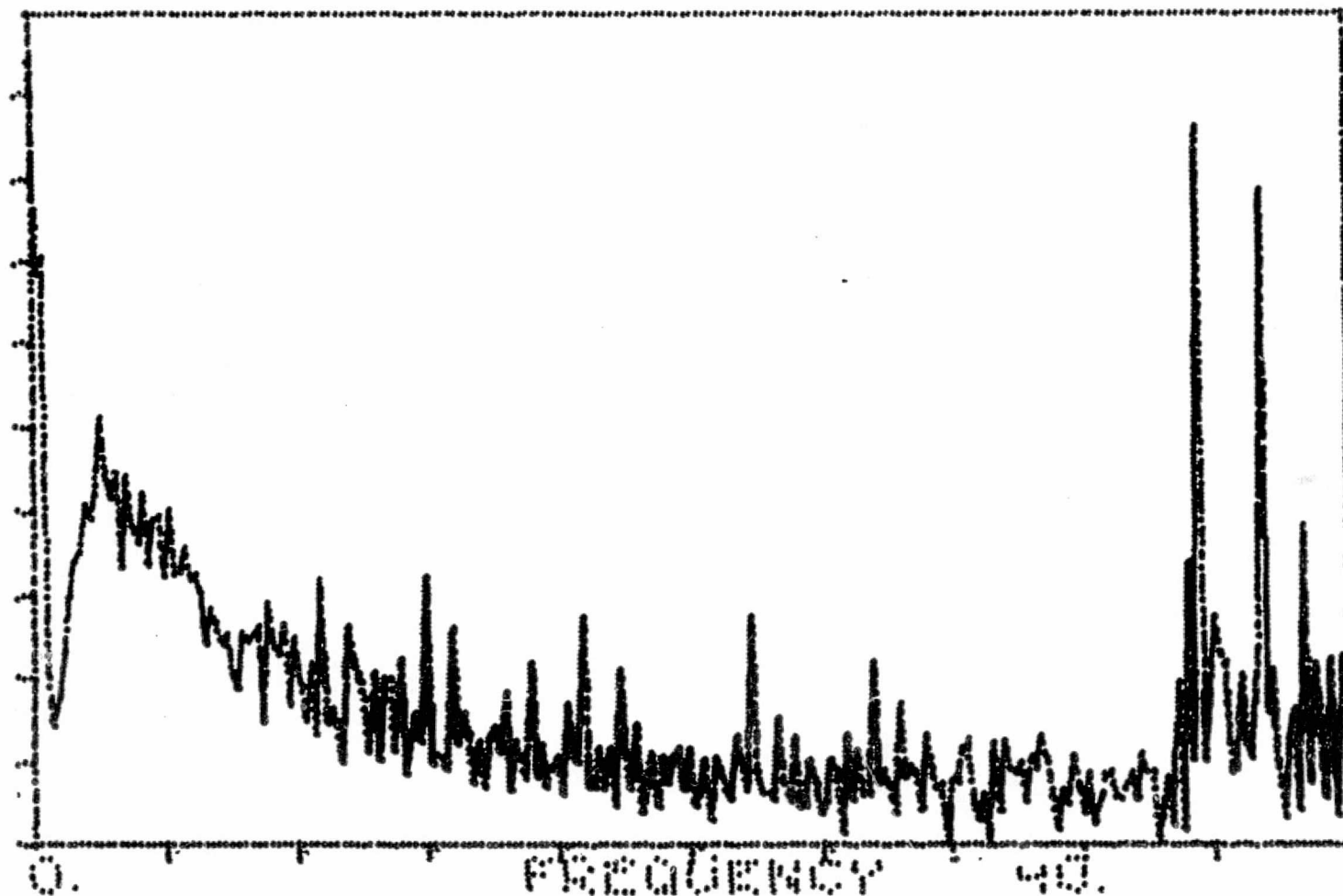
SIZE= 256

DL15/FL1

1.

146W

0.



COMPLEX

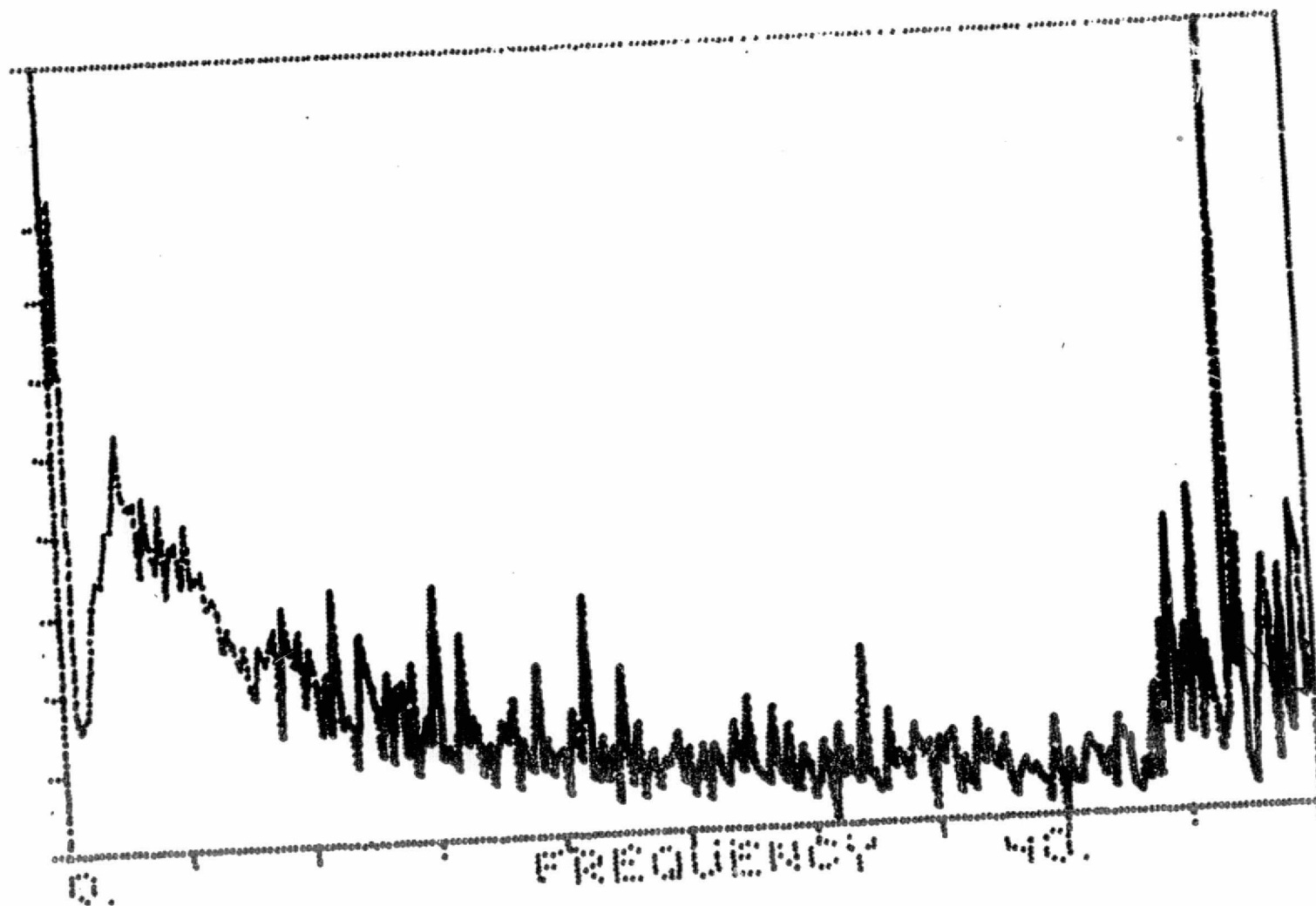
SIZE= 256

DL16/FL1

1.

199M

0.



COMPLEX

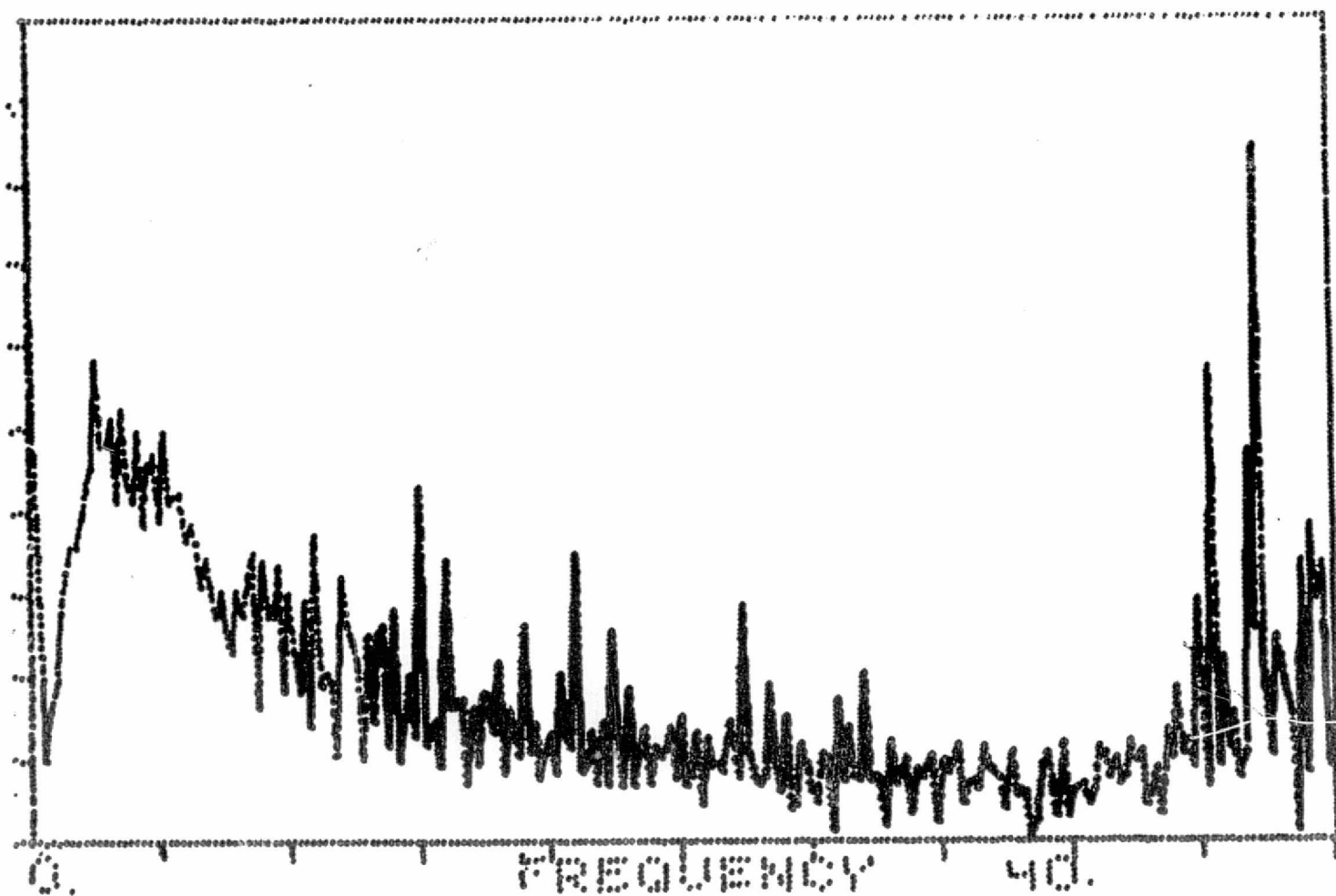
SIZE= 358

DL16/FL1



119014

0.



COMPLEX

SIZE= 256

DL17/FL1